OHIO
MEDICAL AND SURGICAL JOURNAL.

Vol. I. No. 3. Columbus, October, 1876. New Series.

ORIGINAL COMMUNICATIONS.

ART. I.—*Syphilitic Iritis.* By T. R. POOLEY, M. D., of New York, Assistant Surgeon to New York Ophthalmic and Aural Institute, Ophthalmic Surgeon to Charity Hospital, etc. A paper read before the New York Medical Library and Journal Association.

Iritis is the most frequent of all the syphilitic affections of the eye. Graefe, from statistics collected and reported in his lectures, deduces that about sixty per cent. of all cases of iritis occur in persons affected by syphilis. In looking over the clinical register of the New York Ophthalmic and Aural Institute, some time ago, I found fifty cases of this form of iritis in six thousand eye patients. I have made an analysis of these cases, with a view of ascertaining some facts about its relation to syphilitic infection, clinical history, and so on, and in the course of this paper shall make frequent reference to them.

But first let us say a few words of iritis in general. In the older works on ophthalmology the inflammations of the iris were classified according to the dyscrasiæ, upon which they were supposed to depend, thus giving rise to a formidable array of different forms of iritis.

If, however, we adopt an arrangement based on pathological anatomy, we shall greatly simplify the classification, and may include all varieties under the following four groups:

1. Simple idopathic iritis.
2. Serous iritis (also known as Descemetitis, punctate Keratitis, etc.).

XUM

3. Parenchymatous iritis.
4. Syphilitic iritis.

As there are various symptoms which more or less characterize all forms of iritis, we shall find it convenient to first describe them, and then turn our attention more particularly to those belonging to the syphilitic form. The first symptom of iritis is hyperæmia. This always precedes, and, under appropriate treatment, may stop short of actual inflammation. Indeed, hyperæmia of the iris is far more common than is usually supposed. The symptoms are, more or less marked, sub-conjunctival injection, contraction and sluggishness of the pupil, and change in color of the iris, due to the increased vascularity imparting a reddish tint to its natural color. If, however, added to these symptoms we have effusion of lymph at the pupillary margin or into the substance of the iris, we have a veritable inflammation. Among the earlier symptoms of iritis are, injection, more or less marked, of the sub-conjunctival vessels, supra-orbital neuralgia, contraction and sluggishness of the pupil, and a discolored, lack-lustre appearance of the iris.

There is usually some injection of the palpebral and ocular conjunctiva. Sometimes the swelling of the conjunctiva is so great as to mask the sub-conjunctival vessels, and thus prevent us from seeing the characteristic zone of injection. This is particularly apt to be the case if warm applications or poultices have been injudiciously applied to the eye. Sub-conjuctival vascularity, also called circum-corneal and epi-scleral injection, is known by a more or less broad zone of parallel vessels at the margin of the cornea, which is of a rose or pink color, and consists mainly of arterial twigs. The color may, however, vary, and sometimes assumes a blue or brownish tint, which was formerly erroneously supposed to be symptomatic of syphilitic iritis.

There may be more or less chemosis, which is occasionally so great as to raise the conjunctiva round the cornea like a

mound. Sometimes the eyelids are red and puffy, but these latter symptoms belong especially to suppurative iritis. Pain, although most always present, varies very much in intensity. At first there may be only a sensation of itching or burning in the eye, but soon the pain becomes more severe, and assumes a cutting, lancinating character. It may be chiefly confined to the eye itself, or extend to the forehead, temple, and down the side of the nose. This kind of pain is called ciliary neuralgia. Sometimes the pain is referred to the distribution of the ophthalmic division of the fifth nerve and its branches, extending over the corresponding side of the head even as far as the occiput. The pain is commonly increased in severity at night, and abates towards morning.

Although pain is so constant, the eyeball is not sensitive to pressure in uncomplicated iritis; and if the ball be painful to the touch, we can be almost certain that the ciliary body is implicated in the inflammatory process. The severity of the pain occasionally gives rise to constitutional disturbances, and the exacerbations are accompanied by feverishness, impairment of appetite, loaded tongue, or even vomiting.

Photophobia and lachrymation, although existing to some extent, are seldom so prominent or severe as in certain forms of inflammations of the cornea. We come, now, to enumerate the symptoms presented by the iris itself, among the earliest of which are contraction of the pupil, and change in color of the iris. This discoloration, as already remarked, is due to vascularity of the iris, or to exudation into its stroma. In order to estimate this rightly, we should always compare it with the other eye, if this be normal, otherwise an error may easily occur. It is also necessary to distinguish a difference in shade of the iris, due to turbidity in the cornea, or aqueous, from a change in color of the iris itself.

Besides its discoloration, the iris presents a peculiar, dull,

XUM

lack-lustre appearance—its fibrilliæ, or striæ, to have lost their sharply-defined character, and are blurred and indistinct. This depends, in a great measure, upon hypertrophy of the connective-tissue elements of the iris, and, in part, upon exudation upon its surface and into its stroma. The pupil is sluggish, and more or less contracted, except in cases where there is a tendency to increase of intra-ocular pressure. This is the result, in part, of the unusual amount of blood in the iris, and of its being rendered thick by effusion of serum or plastic material into its stroma, thus impeding the action of the circular fibres of the iris.

In testing the mobility of the pupil, the patient should be placed so that a strong light falls obliquely upon the eye; the other eye should be carefully covered by a handkerchief. The affected eye should then be shaded by the hand, which is rapidly removed, so as to admit the light, and the action of the pupil carefully noted. It is to be borne in mind that contraction and immobility of the pupil may exist without iritis being present, as in Keratitis, and when a foreign body is lodged in the cornea; in these cases it depends upon irritation of the ciliary nerves. The pupil soon loses its circular contour, and we see small beads or tags of exudation, which tie down the pupillary margin to the anterior capsule of the lens. These points of adhesion are at first so small as to be overlooked, unless careful examination by oblique illumination is made, or atropine is dropped into the eye. As the exudation increases in quantity, the whole pupillary margin of the iris is fringed by them, or they coalesce, uniting the whole edge of the pupil firmly to the lens capsule, leaving the center of the pupil clear enough to admit of good vision. This condition is variously termed *circular* or *annular* synechia, and *exclusion* of the pupil. We must distinguish between this condition and that in which the exudation invades the area of the pupil, until the whole of it is occluded by a nodule of lymph, the sight, of course, being

correspondingly impaired, which is called occlusion of the pupil.

But the exudation may not be confined alone to the pupillary margin; in severe cases it extends along the posterior surface of the iris as far as the ciliary margin, producing broad and very firm adhesions.

The synechiæ vary greatly in thickness, extent, and number, and become very apparent when atropine is used, by the irregular manner in which the pupil dilates. The surface of the iris may be covered by a film of exudation, or lymph may be mingled with the aqueous humor, giving it a turbid appearance. Again, it may be precipitated against the posterior wall of the cornea, where it appears as small dots of opacity, usually in the inferior part of the membrane (serous iritis); or, again, it may sink to the bottom of the anterior chamber, forming an hypopyon. The amount of hypopyon is sometimes so small as to sink to the bottom of the chamber and escape notice, or it may attain such a size as to almost fill the anterior chamber. In simply iritis the cornea remains clear, or shows only a faint cloudiness, but in the serous form punctate dots appear on the inner layer of the cornea. The cornea may, however, become implicated in the inflammatory process. Vision is often considerably impaired. This is partially due to the impairment of the transparency of the aqueous, to the diminution of the size of the pupil, and occlusion of the pupil. If, however, there be much impairment of sight, without exudation into the pupil, we have reason to expect that the inflammation has traveled backwards to the ciliary body or choroid, giving rise to diffuse opacity of the vitreous humor. It is, therefore, a wise precaution to test and record the acuteness of vision when we first see the case, that we may at once detect any deterioration and ascertain to what cause it is due. The tension of the globe in an ordinary iritis is normal, but in serous iritis it is sometimes increased. Although the smallness of the

XUM

pupil and synechiæ may cause some limitation of the field of vision, the contraction peculiar to glaucoma is wanting, except in some cases of serous iritis.

Having now considered, somewhat in detail, the symptoms common to iritis in general, let us pass on to the consideration of that form with which we have especially to deal. But before entering upon our subject proper—iritis due to acquired syphilis—it will be well to occupy a little space by a consideration of acute iritis, due to hereditary syphilis, in infants or young children.

This affection was first treated of, in connection with its true cause, by Mr. W. Lawrence (*), and, before the work of Hutchinson on syphilitic affections of the eye appeared, was the only form of inflammation of the eye which had been described with any degree of precision as due to inherited syphilis. Since Mr. Lawrence's publication, cases have been put on record by Maunsell and Evanson (†), Dr. Jacobs (‡), Mr. Walker (§), and Mr. Dixon in his book on diseases of the eye. The latter author has given an excellent account of its peculiar features.

But by far the most careful study of the subject has been given us by Jonathan Hutchinson (‖), and I shall take the liberty of copying freely from his book.

This author collects all the cases on record at the time of his publication—six in number—and adds sixteen others afforded by his own experience. In his summary of these cases the following facts are given, an abstract of which will give the best idea of the peculiar features of the disease:

1. *Age.*—The average age of the patients at the time of

(*) A Treatise on the Venereal Diseases of the Eye. London, 1830.

(†) Practical Treatise on the Management of Children, 1847, p. 534.

(‡) Treatise on Inflammations of the Eyeball, 1849, p. 97.

(§) Provincial Medical and Surgical Journal, 1845, p. 293.

(‖) A Clinical Memoir on Certain Diseases of the Eye and Ear, consequent on Inherited Syphilis. London, 1863.

the attack was five months and a half. The oldest was sixteen months at the time of the outbreak, the youngest six weeks.

2. *Sex.*—Five of the infants were males, and sixteen females. The sex of the remaining two is not specified.

3. *Eye Attacked.*—In about one-half the cases it affected both eyes.

4. *Phenomena of the Attack.*—The pink zone of injection was only well marked in two cases; in ten other cases it was present, but not well marked. In two cases no note on this point is recorded, and in one it is expressly stated that during the acute stage of the iritis there was no increase in vascularity of the tunics. Effusion of lymph into the pupil was copious in fifteen cases, occluding the pupils; in four cases it was moderate; in three the iris was merely tumid and discolored, while in one no note as to its state is recorded. In one case the cornea was "hazy;" in one ulcerated, without haziness; and in one lymph effused into the anterior chamber became attached to its inferior surface. In all the others (fifteen eyes) the cornea remained clear throughout the attack.

5. *Result to the Organ.*—In seven cases (ten eyes) the cure was complete, every trace of lymph having been removed; in two or three other cases it was complete, except that two or three slender adhesions remained. In three cases (four eyes) the result is not known. In twelve cases one pupil was permanently occluded by organized false membrane.

6. *Other Symptoms of Syphilis present at the time of the Iritis.*—In several cases the account of coexistent symptoms is either wanting or very incomplete. The syphilitic cachexia was present in twelve cases, and its absence noted in five. Psoriasis of the general surface was present in ten instances, a papulæ rash in two, psoriasis palmaris in one, erythema marginatum in two, and "peeling of the skin" in one. In one mucous ophthalmia attended the iritis, in one the eye-

XUM

lashes had fallen out, and in one the lids were affected by tinea tarsi. "Snuffles" in the nose existed in eleven cases, in four there were apthous or other sores in the mouth, in five soft condylomata around the arms were present, and vaginal discharge in one. In two cases the history gave conclusive evidence, but there were no specific symptoms at the time of the outbreak of iritis.

7. *Length of period which had elapsed between the date of the primary disease in the communicating parent and the birth of the infected child.* The data on this point is very incomplete. In one instance the mother had had primary syphilis only three months before the infant's birth, and in another the period was four, and in a third, six months. In five cases it seemed probable that a period somewhat less than a year had elapsed, whilst in five it had been at least two years. In two, judging by the fact that the mother had borne a number of children, some of whom had showed suspicious symptoms, the date of the original infection in the father could not be placed nearer than six or seven years. Of the twelve cases in which alone a history of the family is recorded, *we find that the affected infant was the only living child of its parents in thirteen instances.* In four it was the result of its mother's first conception; in four miscarriages only had preceded its birth; and in four other cases conceptions had terminated either in abortions or in the birth of children who had died of syphilis.

8. *Infrequency of this kind of Syphilis.* It is the rarest of the symptoms of hereditary syphilis. It often escapes notice. The absence of the sclerotic zone of injection, with the very small amount of local symptoms, together with the fact that young infants usually keep their eyes shut, will account for this. In confirmation of Mr. Hutchinson's statement that this form of disease is very rare, I may say that in eight years of infirmary practice I have only seen one case of the kind. This was in a young infant, which was a patient of

one of my colleagues. This child had an acute inflammation of the iris and condyloma, but it was difficult to exclude the possibility of acquired taint, and there were no other symptoms of syphilis present. Hutchinson says that during seven years connection with the Metropolitan Free Hospital in London, he has never treated a case in connection with that institution, although numbers of cases of congenital syphilis present themselves, and he has carefully examined the eyes of all.

We now come to the consideration of the peculiarities of iritis, occurring in acquired syphilis.

This form of iritis is nearly always of the plastic or parenchymatous type, occurring usually among the earlier secondary symptoms; in some cases there is a coexistent syphilide. It is also, in a certain percentage of cases, distinguished by the occurrence of peculiar tuberculous nodules, gummy tumors of Virchow, called also by Beer condyloma. These gummy tumors appear very frequently in syphilitic iritis. In the fifty cases analyzed by me, their occurrence is noted in nine cases, and Schmidt records their existence seven times in thirty-four cases. They may occupy any part of the iris, but are most commonly situated on its pupillary margin, although they may also appear on the ciliary border or on a point between the two. This form of iritis was known to McKenzie, Lawrence, and others of the older authors, who attributed the appearance of these nodules to the lymph assuming a tubercular form in or on the substance of the iris. They are now known to be identical in structure with gummy tumors, as described by Virchow. The latter author first entertained this view, but was unable to pronounce a positive opinion, because he was unable to verify it by examination.

Colbert, however, had the opportunity of examining one of these growths, which was removed by iridectomy by Alfred

Graefe.* He found the tumor to be composed of small cells and occasionally one or more nucleoli. Besides these imperfectly developed cells, he also found fusiform cells arranged in a linear series, which were, without doubt, the beginning of new vessels in the way of formation. The examination showed neither muscular fibres nor transparent pigment cells, these proper elements of the original tissue having been entirely replaced by new elements. The general appearance of these growths serve to distinguish them from merely plastic exudations, and points to the conclusion that they are a cellular and not a plastic formation. This view is still further supported by the manner in which they disappear under treatment; they contract irregularly, and seem to retire within the tissue of the iris in quite a different way to which lymph behaves while undergoing absorption. They appear at first deeply imbedded in the parenchyma of the iris, orignating in the deeper portion of its connective tissue, and may attain a very considerable size, their apex even touching the posterior wall of the cornea. On account of the presence of pigment cells and vessels, the nodules often assume a dark reddish-brown color. Sometimes they undergo a fatty or purulent degeneration, breaking down into a yellow grumous mass, which becomes mixed with the aqueous humor, and gravitates to the bottom of the anterior chamber. They, however, more often contract and undergo more or less rapid absorption, and always at the expense of the iris tissue which becomes atrophic. They may be scattered about over the iris, but it is much more common to see them confined to one portion of it, and, although the circum-corneal zone of injection is well marked, the intensity of the injection is the most pronounced in that portion of the iris upon which the tumor is situated; the corresponding portion of the iris is the most thickened and

* Archiv. für Ophthalmologie, vii., 1.

swollen, and is attached to the lens capsule. If not properly treated, they may extend so as to involve the ciliary body and choroid; and a case is reported by Von Hippel* in which the gummy tumor involved all the coats of the eyes.

It should be remarked that displacement of the pupil is caused by these growths, and this condition was formerly considered characteristic of syphilitic inflammation. We must also remember to distinguish these tumors from swellings, the result of lymphoid exudation into the parenchyma and upon the surface of the iris.

Besides these gummy tumors, a peculiar form of exudation has been recently described as sometimes occurring in syphilitic iritis. This form of exudation was first described by Prof. Schmidt, of Marburg,† as occurring in cases of severe iritis, as a copious mass, resembling a cataractous lens, dislocated into the anterior chamber. Following him, Gunning reports three cases, in which lens-like exudations were noticed by him.‡ The last authority says the exudation is poured out suddenly, and disappears in a few days without leaving any traces of its presence behind, and gives to it the name of gelatinous exudation. But neither of these authors refer to it as occurring with syphilitic iritis. Dr. Gruening, of this city, however, has observed a case in which this form of exudation occurred simultaneously with a gummy nodule of the iris,§ and Dr. Kipp, of Newark, N. J., reports a similar case.‖ This form of exudation was first pointed out to me by Prof. Knapp, as occurring after operations upon the iris, and he gave to it the name of spongy. It comes abruptly, and soon more or less fills the anterior chamber. It is made up of fine filaments, crossing each other at different

* Archiv. für Ophthalmologie xiii., 1, p. 65.

† Klinische Monatsblätter für Augenheilkunde, p 94, 1871.

‡ Klinische Monatsblätter für Augenheilkunde, p. 7, 1872.

§ Archives of Ophthalmology and Otology, Vol. iii., No. 1, p. 20.

‖ Loc. cit. p. 73.

XUM

angles, and forming a net-work which closely resembles the gross structural arrangement of sponge. Absorption takes place rapidly without alteration in appearance, or the exudation may first be transformed into a bluish white homogeneous and sharply-defined mass. Gruening makes the observation that the gelatinous exudation of Gunning is, in reality, a transition stage of the spongy exudation of Knapp.

This form of exudation can not be considered as peculiar to syphilis, since it occurs in both idopathic and traumatic inflammations of the iris, and I have seen it most frequently after operations. Dr. C. S. Bull has observed that iritis due to syphilis assumes a particularly unfavorable course when it occurs in negroes.* He says the iritis usually appears simultaneously with some eruption on the skin, generally of a papular form, is of a plastic type, posterior synechia is a constant accompaniment, and the cornea usually becomes diffusely opaque at an early date. The inflammatory process extends to the choroid, and the vitreous becomes diffusely opaque; in short, there is irido-choroiditis. The process in the iris now becomes a suppurative one, and the eye is lost by the purulent process extending to the choroid. In one case the eye was lost under glaucomatous symptoms, which terminated in total amaurosis in spite of iridectomy. In only one out of six cases observed by Bull did the process fail to destroy the eye, and in this case vision was reduced to counting fingers close to the face.

Complications.—Syphilitic iritis is far more frequently complicated by inflammations of the other tunics of the eye than the other varieties of iritis. The cornea, ciliary body, choroid, retina, optic nerve, and the vitreous humor may become involved. Hence it is of importance to submit the patient to ophthalmoscopic examination, that these deeper lesions may not be overlooked. Space will not allow us to enter into a

* Brown-Séquard's Archives of Scientific and Practical Medicine, No. 3, March, 1873, p. 249.

detailed description of the characteristics of these diseases, we can only speak of their comparative frequency.

Schmidt observed, in his thirty-four cases, Descemetitis, or deposits, in Desecemet's membrane, four times, in four circumscribed infiltration of the cornea; in seventeen, opacities of the vitreous; in six, retinitis. In two cases the gumata starting from the iris involved the ciliary body, and came forward through the sclera, beneath the conjunctiva. In two cases a chronic cyclitis, with diminished tension of the eye-ball, followed the iritis. My notes in regard to this particular are very deficient, for in most of them no note on this point was recorded. The complications which were recorded are diffuse infiltration of cornea, serous iritis, neuro-retinitis, cyclitis, choroiditis disseminata, and retinitis, but the record in regard to their comparative frequency is of no value, owing to the absence of histories of the cases.

Bull (l. c.) says that he has often noticed retinitis as a complication of syphilitic iritis, with limitation of the field of vision corresponding to the affected portion of the retina.

Period of Syphilitic Infection in which Iritis occurs.—There seems to be a conflict of opinion among authors upon this point. Bumstead says that "no precise rule can be laid down; still the form which is most common, and most deserves attention, is to be ranked among the secondary symptoms."* Without being able to furnish any statistics as to which the exact date of its development occurs, he has often been struck with the fact that when no mercury has been taken iritis occurs in from four to six months after contagion. Wecker, on the contrary, observes that the specific form of irits occurs oftener when the disease has been a long time in developing itself than when it runs a rapid course.† Coulson,‡ from the result of a long period of observation in the Lock

* Bumstead on Venereal Diseases. New York, 1873.

† Maladies Des Yeux. Paris, 1867.

‡ Treatise on Syphilis. London, 1869.

XUM

Hospital, claims iritis as belonging to the earlier secondary manifestations of the disease, and occurring up to the sixth month after infection. In many cases, however, iritis sets in much earlier, between the second and third months. Stellwag, again, says that iritis occurs after syphilis has existed for some time, and has been variously localized.* These few quotations show the variance of opinion which exists among different authors. My own observations on this subject are decidedly in favor of the statement that iritis belongs, as a rule, to the earlier stages of secondary syphilis. I have usually found it to appear within six months after contagion, and frequently as soon as the second or third month; and in one case of my own there was indisputable evidence that it occurred in one month after the contraction of the disease. In many cases irits is the first general symptom which has induced the patient to seek medical advice, but a careful examination will generally develop the fact that some other symptoms of syphilis, such as alopecia, engorgement of the cervical ganglia, mucous patches, erythema, or papules had preceded it. However, iritis does sometimes occur in the later stages of syphilis, and when so, it differs from that attending the earlier stage by it insidious and chronic form. It does not appear that iritis is associated with any particular form of eruption. In Schmidt's cases, to which we have so frequently referred, it is noted that in twenty-four instances the iritis was associated with some syphilitic affection of the skin or mucous membrane. The coincidental appearance of iritis with a papular eruption is so common that some authors have been inclined to assume a causal relation; this is, however, more rationally explained by the fact that this is one of the most frequent of the evidences of the existence of the constitutional disease. In my own observations on this point it is noted that in fifteen

* Stellwag on the Diseases of the Eye. Amer. Translation. 1873.

cases there were secondary manifestations present, such as roseola, papular eruptions, and sore throat. McKenzie says that the local secondary symptoms which he has the most often found associated with iritis have been pustular, papular, and scaly eruptions on the face and over the body, and next to this sore throat.*

Syphilitic iritis occurs more frequently in males than in females. In the fifty cases which I have examined, thirty-six were males and only fourteen females. This accords with the statement of other observers, and is, I suppose, to be explained by the fact that males are more exposed to syphilitic infection than females, and that a single prostitute may infect a large number of her unfortunate customers.

This form of iritis usually affects both eyes, although at different intervals. Schmidt found that in only one case were both eyes affected at the same time; in thirteen cases both eyes were affected, but at different times.

My own notes as to the frequency in which the eyes were involved is as follows: In seventeen cases the right eye; in fifteen the left; in three both simultaneously; in five both, but at different periods; and in ten cases the eye affected was not recorded. It would appear from these statistics that there is very little disparity in the eye affected, although some authors maintain that the left is the one most commonly attacked by iritis.

If we now inquire whether we can diagnosticate iritis depending upon syphilis from other varieties of iritis, I think we can answer in the affirmative for the majority of cases which come under our observation. The characteristics of syphilitic iritis, so far as the appearance of the eye is concerned, we have found to be—1. The tendency of the injection to assume a partial character. 2. The occurrence of

* Diseases of the Eye. London, 1866.

XUM

gumata. 3. The coincidence of some other syphilitic manifestation, such as a syphilide, sore throat, adenitis, or the cicatrix of a chancre.

It must be admitted, however, no one of these symptoms alone (if we except the gummy tumors) can be taken as proof positive of the syphilitic origin of the disease when there is an absence of other secondary symptoms. Even when iritis occurs soon after the healing of a primary sore, we can not be certain of its specific origin, but the presumption is so strongly in support of it that we ought to employ mercurial treatment. While admitting, then, that in the majority of cases some other evidence of syphilis is necessary to complete the diagnosis, its presence is to be strongly suspected in all cases of parenchymatous iritis, and more especially where the injection is more strongly marked in one quadrant of the iris.

This is a symptom which, we think, is of much value, and in the cases we have examined it is frequently noted that the injection was more pronounced in some one direction, and most often downward and inward. When gumma are present, there can be no doubt of the syphilitic origin of the inflammation. The very exceptional cases in which they have been recorded as existing without any other evidences of syphilis, are only the exceptions which make the rule. Every one who has tried it knows how difficult it is to obtain the truth from patients in regard to this particular, and it may very well have been that there existed a syphilitic infection in these very cases, although no evidences were present at the time and the patient denied it.

The prognosis in acute cases, and even where gummy tumors are present, is very good, if the patient be brought under the effect of mercury as soon as possible, and if the disease be seen at an early stage while the synechiæ are yet so brittle as to be easily torn by the action of atropine. It becomes more grave if the disease has progressed to the for-

mation of broad adhesions which resist the action of atropine.

It should be borne in mind that syphilitic iritis is usually of a parenchymatous type, and accompanied by considerable exudation of lymph, not only at the edge of the pupil, but also into the structure of the iris, which fact renders the prognosis graver than in simple idopathic iritis where there is less exudation. Then, too, the tendency to the implication of other tunics must not be forgotten. The prognosis for the future of the eye is always rendered more or less grave when synechiæ are left, for their presence predisposes to attacks of recurrent iritis and glaucoma. While, as a rule, the percentage of recoveries in syphilitic iritis is large, under appropriate treatment, the inflammation leaves sequelæ, which renders the function of the eye more or less doubtful. Exclusion and occlusion of the pupil always have a bad effect upon the nutrition of the eye, and if the communication between the two chambers be not restored by the performance of iridectomy, is very apt to result in phthisis of the globe and loss of sight.

Newly formed products of inflammation (gumma) are, it must be remembered, more liable to impair the functions of the iris than simple exudation, and hence their presence adds to the gravity of the prognosis.

We now come to speak of treatment. The first point to be secured in the treatment of iritis is perfect rest for the eye, and this can only be secured by keeping the patient in a darkened room. The best results are always obtained and the duration of the disease shortened by keeping the patient confined to bed until the severity of the attack is over. It is of great importance in this as in every form of iritis to keep the pupil widely dilated. This should be accomplished as soon as possible, and maintained throughout the entire treatment of the attack. To accomplish this a strong solution of atropine will be required. In the normal condition

XUM

of the iris a very weak solution will suffice to dilate the pupil, but in iritis it is very different, on account of the inflamed and swollen condition of the tissues and the exudation into its structure, which offer great resistance to the action of the drug.

The action of atropine is useful in three ways. 1. Wide dilation of the pupil is produced, and the iris removed from the lens capsule, thus preventing adhesions from forming. 2. More perfect rest will be afforded to the inflamed muscular tissue, for if the constrictor muscle of the pupil is not paralyzed, its constant action in regulating the amount of light admitted to the eye must of necessity increase the inflammation, just as would be the case in any other inflamed muscle which could not be kept at rest. 3. Atropine is supposed to diminish intra-ocular tension, and, therefore, to be useful in diminishing the state of congestion of the iris and ciliary body.

It is still a point under dispute whether atropine does really diminish or increase intra-ocular tension, but be this as it may, the irritation of the eye and the ciliary neuralgia are relieved in the most decided manner by its use. A solution of four grains to the ounce is the strength usually employed, and the frequency with which it is instilled must depend upon the condition of the iris. If the synechiæ are firm and numerous, or if the pupil be much contracted, or dilates but slowly, a drop may be put in the eye as often as every hour or two hours. Solberg Wells is in the habit of employing a solution of from four to six grains, and of applying it at five minutes intervals for half an hour at a time, this process being repeated, if necessary, three or four times a day. He thinks that under these directions the patient employs the atropine with much greater regularity than when directed, in general terms, to use it every hour or half hour.

This method of employing atropine, however, is open to

the objection that it is very apt to be followed by poisoning, from the passage of the drug through the lachrynal puncta to the throat, although Wells says that he has never seen it occur in his practice. In some cases which I am obliged to treat as out-patients, I always drop in the atropine myself, at short intervals, until some effect has been produced on the pupil or the result is negative.

The energetic use of atropine can not be too strongly insisted upon in syphilitic iritis. It is, unfortunately, too much neglected by general practitioners, or only inefficiently employed, as the evil results of many cases of recurrent iritis and iride-choroiditis which present themselves at our public institutions testify. How long should atropine be continued? When dilatation is once obtained, it should be maintained until the circum-corneal zone of injection is gone, but of course it will not be necessary to use it so often after dilatation is accomplished. It has been held by some authors that by maintaining dilatation of the pupil for so long a time permanent mydriasis may result from paralysis of the sphincter-pupillæ; but if this be true at all, it must be very rare, for although in the habit of employing atropine every day, I have never once seen such a result ensue. It occasionally happens that the long-continued use of atropine induces a certain amount of conjunctival irritation, such as vascularity of the lower lids, accompanied with considerable swelling and great irritation or acute granulation. In such cases it must be stopped for a time, or some mild astringent combined with it; but some patients will have such an idiosyncrasy against its use that we shall have to try some other mydriatic.

To guard against the possibility of poisoning when strong solutions of atropine are made use of, pressure should be made over the lachrynal sac for a few moments after each instillation. Von Graefe recommends the patient to close the eye directly after the application, and subsequently, on

XUM

opening the eye, to wash it well. He also, sometimes, employed a subcutaneous injection of morphine at night. The symptoms of atropine poisoning are too well known to render it necessary to say any thing about them here. The best and most rapid antidote is morphine by subcutaneous injection, one-fifth or one-fourth of a grain, to be repeated if necessary. Calabar bean has been recommended to be used in connection with atropine in tearing synechiæ, but is of very doubtful utility.

The abstraction of blood by the application of leeches to the temple is a most valuable adjunct in allaying the pain and facilitating the action of atropine. From four to six leeches should be put on the temple, care being observed not to place them too near the eye. They should be allowed to remain until they drop off of themselves, and then the bleeding may be encouraged by warm applications. It is not unusual to observe that in some cases which have resisted the action of atropine after the application of leeches dilatation of the pupil will at once ensue. This is explained by the relief afforded to the inflammatory irritation and intra-ocular pressure, allowing free absorption through the cornea, and hence the effect of atropine will now be marked and rapid.

It is the more common practice to use atropine first alone, and if it does not act promptly to order leeches, but I always order them at once in all cases of acute iritis; for I know of no remedy more effectual in relieving the pain, and I repeat their application whenever the pain returns. In the majority of cases, if not always, the patient should be brought under the influence of mercury as speedily as possible. I know that there is a variance of opinion among authors on this point, and you will find it stated that even syphilitic iritis may be treated by atropine and opium alone. In a book which I reviewed some time since, I found it stated that, "as a general rule, it may be affirmed that mercury is never

to be employed in the treatment of iritis, except in cases arising from syphilis; in other cases this drug is useless, and often positively injurious." In my opinion, this is very bad advice, and I would say that in all cases of plastic iritis, with effusion of lymph and synechiæ, whether syphilitic or not, mercury is a most useful agent, and, in the latter form, preëminently so. As to the manner of using the drug: You may give calomel, guarded by opium, blue mass, the biniodide or protiodide of mercury. But the method which I prefer to all others is the inunction treatment, as by it the digestive powers are not impaired, and the constitutional effects are more speedily and surely obtained. From half a drachm to a drachm of mercurial ointment is to be rubbed into the inside of the thighs and arms morning and evening, never carrying its use to the point of ptyalism, but stopping as soon as the gums are tender, then discontinuing its use for a time, and employing a gargle of chlorate of potassa. The soles of the feet are sometimes selected for the inunctions, and the patient wears a pair of socks the inner surface of which have been smeared with the ointment. Mr. Teale recommends the ointment to be smeared on a broad piece of flannel, which is to be worn round each arm of the patient, to which a small quanity of ointment is to be added every night. I prefer to rub the ointment thoroughly into the skin, as I think it is by this means the more readily absorbed. The inunction treatment should not be employed unless the patient can remain in bed. In very serious cases, especially where gumma are present, it may be advisable to give at the same time some form of mercury by the mouth, or to use hypodermic injections of the bichloride. The latter mode of treatment has been employed by us in the New York Ophthalmic and Aural Institute—from one to two injections of the bichloride of from one-sixteenth to one-eighth of a grain in the course of twenty-four hours.

This seems like heroic treatment, but in severe cases,

XUM

where there is a constant tendency to fresh exudations and formation of broad synechiæ, we have no time to lose if we wish to preserve the function of the eye. To effect this we have no more reliable agent than mercury, and the quicker we can produce (even though it be at the expense of the general economy) absorption, the better will be the results obtained.

It will generally be well to follow the mercurial treatment by a course of iodide of potassium, and Zittmann's decoction will be found to be useful, and an agreeable way of administering it. The nocturnal pain and sleeplessness should be relieved by opium. A hypodermic injection of morphine at night, when the pain is severe, is the best method of using this drug. Wecker recommends the use of warm fomentations in gumma growths. He continues their use day and night, without intermission, for several days. Wells has also found this method of treatment efficacious. I have no experience with it, but it can only be used in exceptional cases, for the uninterrupted attention of a nurse is required both day and night to carry it out effectually.

Operative interference will be necessary in cases of recurrent iritis, which depend upon broad synechiæ, and in exclusion and occlusion of the pupil, when it will be necessary to perform iridectomy. This operation may also be required if there be glaucomatous complications. As a rule, however, operations should not be made in the acute stage of the disease; they are particularly indicated for the conditions which remain after the inflammation has subsided.

106 West Thirty fourth street, N. Y.

ART. II.—*The Nature and Treatment of Delirium Tremens.* By STARLING LOVING, M.D., Professor of Theory and Practice of Medicine, Starling Medical College, Columbus, Ohio.

It is not my purpose to discuss, at any length, the nature of delirium tremens, but to consider some of the modes of treatment which have been practiced within what may be called modern medical historical periods.

Delirium tremens is a peculiar affection, characterized by active delirium, hallucinations, almost constant muscular action, which, from its irregularity, causes trembling, and insomnia.

In pathology and symptoms it differs from delirium ebriosum, with which it is sometimes confounded.

Delirium tremens is always a consequence of the excessive use of alcohol, but it does not generally follow a first or second debauch, being the result, in much the largest proportion of cases, of that condition known as chronic alcoholism. It is most commonly observed in persons over thirty years of age, but occurs in younger persons.

It is always associated with, or preceded by, derangement of the functions of the alimentary canal, which continues during the attack. This consists at first in anorexia, constipation, and afterwards nausea and vomiting. In occasional cases there is diarrhœa instead of constipation, but such cases are exceptional. When uncomplicated, it is not attended with fever or febrile symptoms; there is rarely slight fever at the outset. Accidental circumstances, injury, or acute disease, frequently develop an attack in subjects seemingly before not disposed.

The sexes are alike liable to the disease, but it is more common among men, because the habit of drinking alcohol to excess among them is more prevalent.

It is more likely to be caused by the abuse of distilled liquors than wine or malt liquors, and more liable to be caused by malt liquors than wine, but results from the excessive use of all forms of alcoholic drink, but from no

other influence. A morbid condition resembling it sometimes results from the excessive use of opium and tobacco, and is seen in the course of certain nervous disorders; but this condition differs essentially from delirium tremens. Frequently the attack occurs when the habit of drinking is suddenly interrupted, and the want of the accustomed stimulus is thought by many to be the exciting cause, but it as often occurs when there has been no interruption, and while the subject is under the influence of alcohol. Shocks to the nervous system, mental disturbance, and the occurrence of other forms of disease, often precipitate an attack, not because they enforce abstinence, but seemingly from the fact that they increase derangement of the functions, including those of the nervous system.

It is found, almost uniformly, on inquiry, that the sufferer has not eaten nor slept regularly for days, and often weeks, previous to the attack, the alcohol taking the place of food, and the loss of sleep arising from a variety of causes, all connected with the habit of drinking.

The disease is most common in cold weather, but occurs in all seasons.

The Anglo-Saxons and the Irish Celts are races most subject to this disorder, because the most intemperate in the use of malt and distilled liquors. Persons of nervous temperament are more apt to suffer than those of other temperaments. One attack does not seem to predispose to another.

The pathology of delirium tremens is not definitely known; various theories, founded on various circumstances, have been advanced, but examination after death does not reveal uniform morbid changes. In many instances in which the person has died of the uncomplicated form of the disease, no special morbid change has been found.

Generally, there is over-fullnes of blood in the brain and its membranes, but this is often mere static fullness—venous rather than arterial congestion. If the patient has

died after a prolonged attack, or if alcoholism in his case was of long standing, evidences of œdema and dropsical effusion are not unfrequently observed under the membranes and in the ventricles of the brain. Sometimes extravasations of blood are found in the cerebral substance, but this is due to the occurrence of apoplexy, and is not a part of the pathology of delirium tremens. When death occurs, it is, in the greater number of cases, due to complications or intercurrent disease, as apoplexy, just mentioned, pneumonia, or injury. Sometimes it is undoubtedly due to injudicious treatment. Congestion of the lungs, bronchitis, and pneumonia are the most common complications, occurring not as direct consequences of alcoholism, but they occur partly from the vitiated nutrition incident thereto, the irritation of the lungs from the constant presence of large quantities of alcohol in their structure, together with the exposure, the want of food and sleep, and sometimes the violence which precedes an attack.

Delirium tremens, developed in the persons of inebriates who have suffered from severe injuries, is more apt to be complicated with local congestions and inflammations, including erysipelas, than when it occurs under other circumstances, and the fatality is consequently greater in such cases.

Death sometimes results from paralysis of the heart, or pure asthenia, the heart not becoming truly paralyzed, but suddenly losing its power of contraction from weakness. Those cases in which death occurs suddenly on the supervention of the symptoms of congestion of the brain or of apoplexy are usually not cases of delirium tremens, but of delirium ebriosum.

Although we are not certain of the precise structural changes which constitute the intimate pathology of the disease, we know the cause to be the prolonged effects of alcohol upon the nutrition, its local effects upon the stomach and bowels, and through the circulation upon the remote tissues, especially upon the brain and its immediate depend-

encies. Whether the effect upon the structure of the nerve centres is the result merely of the presence of the irritant or chemical union with the nerve cells, it is impossible to decide by our present means of investigation.

The commonly accepted opinion is that first stated, namely, that the alcohol produces disordered action by its mere presence in the brain, exciting constant irritation, and interfering with the cell-changes in the structure of the organ. Some suppose that it unites with the albuminous portion of the tissue, forming chemical union, which soon renders normal function impossible. Perhaps one or the other of these opinions affords the clue to the nature of the disease, and it may be unnecessary for us to seek further, but there are reasons which give strength to the opinion that it may originate in reflected irritation. One of the strongest reasons is the fact that no case of the disease ever occurred without antecedent disorder of the digestive organs, continuing for a variable, but always a considerable length of time, and the first steps toward a cure consist, always, in endeavors to correct such disorder, which, when successful, usually puts an end to the case. Further, while post-mortem examinations do not reveal uniform morbid changes in the brain, they do show the stomach to be diseased in most instances.

The tendency of delirium tremens is toward recovery, the fatality, even under unfavorable circumstances, being very small; but complications or injudicious treatment often render it an exceedingly dangerous malady. Perhaps it is not exceeding bounds to assert, that in the majority of fatal cases the issue is due to the one or the other.

In uncomplicated cases the cure is sufficiently simple. It consists in attention to cleanliness and comfort; provision for the security of the patient, to prevent him from doing violence to himself or others; the regulation, as far as possible, of disordered functions, especially of the alimentary apparatus; giving of nutritious food, highly spiced, that the

system may be sustained until the alcohol has been eliminated, and the injury to the tissues repaired.

This is a short summary, and might convey the idea that the management of the disease is a trifling matter, but all who have had any experience, and comprehend the exceeding difficulty experienced in almost all cases in carrying out any part of what has been proposed, know this is not true. Nevertheless, the summary embraces all that is necessary, and could we content ourselves, and convince the friends of the patient that nothing more *is* necessary, it is certain that the majority of our patients would recover without other treatment. More time would be consumed, the friends of the sufferer would be anxious and impatient before the termination of the case; perhaps the liability to accident is increased, but I am of the opinion, deliberately formed, that leaving the objections just stated out of the question, it is more honest and philosophical to trust to the measures suggested than to combine with them the use of large quantities of active and dangerous medicines.

In early times, like many other diseases, delirium tremens was thought to be the work of the Grand Adversary, and the unfortunate was subjected to exorcisms and anathemas, which had the negative merit of being not harmful if they did no good, and this mode of treatment may be remembered as one possessing at least the merit of safety, which is more than can be said of several modes of treatment which have since been practiced.

This theological method of treatment might be followed, in connection with the suggestions mentioned further back, without disadvantage; in fact, we follow the main precept in forbidding the alcohol, the chief element of the whole trouble, and the remaining formulæ might be useful, provided we had means to satisfy modern ideas of theology and medicine.

The more modern plan of using powerful cathartics, with

XUM

emetics and venesection, while objectionable in many respects, is not without merit in the first stages of the malady, particularly in those cases wherein there is congestion of one or more of the important organs; but it is most valuable when there is inflammation and fever.

It is still more applicable in cases of delirium ebriosum.

In uncomplicated cases, except in the outset, before the full establishment of the disease, this mode of treatment has long been abandoned, for the reason that under it the mortality is so great as to condemn it. No practitioner, with the prevalent ideas of pathology and therapeutics, thinks of venesection in cases presenting the features of temperature, pulse, and general strength ordinarily observed. Exceptions are now and then met wherein accidental hemorrhage, or venesection, is followed by immediate amelioration of symptoms; the cases presenting the ordinary signs of the uncomplicated disease, which persist, in spite of treatment, and continue longer than usual, are cases in which local congestion or inflammation has escaped notice, and has been the cause of difficulty.

There can be no doubt of the efficacy of purgation in the formative stage. In many cases a cathartic, when the patient is suffering from the "horrors," followed by a single dose of an opiate, will prevent or cut short an attack. When the tongue is furred and the breath is fœtid—when, without the evidences of gastritis, there is persistent nausea—the combination of an emetic with the cathartic is clearly indicated, but the use of emetics, to be beneficial, must be confined to the premonitory stages.

When the first stage has passed and the patient is troubled "with thick coming fancies," this treatment is no longer applicable.

If, as is frequently the case, there is much debility, any purgative other than a mild laxative will obviously be harmful. The good effects of purgation seem to be completed by the after administration of an anodyne, and the common

plan is to give immediately after the operation of one or both an opiate alone, or associated with camphor or a glass of one of the malt liquors. Equal benefit is sometimes derived from the administration of capsicum with the opiate; as often, perhaps, the capsicum does as much good when given alone in the form of powder or infusion.

Owing to the effect of capsicum on the stomach and the nervous system, it seems to exercise an influence over gastric and nervous affections of inebriates beyond what we should expect from its effects in other diseases. It is the popular and efficient remedy with many physicians, who attempt to cure the habit of drunkenness; and we are informed by those whose experience gives weight to their opinions that the infusion taken when the desire for drink arises with the inebriate, a drink of the infusion hot, will satisfy it almost as perfectly as alcohol. Capsicum, like many other remedies, displays its effects to best advantage in the premonitory stages of the disease; afterwards it does not exert much control except as a stimulant to the functions of the stomach.

For many years opium was, as it is still regarded by many of the profession, the chief and really the only important medicine in the treatment of delirium tremens, and until within a recent period the sole object of treatment was to give the drug in sufficient quantities to "force sleep." We are all familiar with this mode of treatment, know the enormous quantities required in many cases before the end is attained, if it be attained, and we appreciate the risk incurred in the administration of this medicine in the quantities necessary to accomplish the object. Perhaps all practitioners have watched patients under the influence of repeated doses, and have observed the effects of the drug as they appear one after the other—the contracted pupil, the venous tinge of the skin, the enfeebled movements,

XUM

the increasing derangement of the mental faculties, the diminution of sensibility until profound narcosis results, the patient passing into a deep stupor from which he emerges rational and convalescent, but greatly prostrated, or the stupor, once established, growing more profound, until death closes the scene. But the administration of even large quantities does not in all cases bring sleep; dose after dose is administered, the characteristic effects of the medicine all become apparent, except that the patient does not sleep, nor does the delirum subside; the patient, though evidently more feeble, still struggles, his delirum is still present.

The practitioner feels that he is now on dangerous ground; he can not carry his remedy much farther without the certainty of at least placing life in jeopardy, if he does not destroy it, yet he dislikes to acknowledge that he has failed in his object, which he must do at the risk of incurring the doubts of the friends of the patient as to his skill.

We can account for the failure of opium to produce its ordinary effects in this disease on one of two hypotheses: we may say it does not produce its ordinary effects because of the morbid conditions of the system always present. In the first place, in delirum tremens, as in tetanus and other nervous diseases in which exaltation of function forms a distinctive feature, the susceptibility to its influence is very greatly diminished, not abolished as in tetanus, but greatly diminished. In the second place, owing to the condition of the digestive apparatus, the medicine is not absorbed so rapidly as under ordinary conditions; indeed, there is good reason to suppose that in many instances but little of any thing is absorbed from the stomach in this disease, at least during considerable periods.

With this in view, we generally prescribe larger doses in the beginning, and continue their use until we have gone as far as prudence will allow (often beyond its bounds),

but it is unwise to presume too far, for in some cases neither of these conditions are present; the medicine is rapidly absorbed and the susceptibility is but little changed, and we are much surprised at the result of our heroic treatment. Such results may occur from the influence of the first dose, but they may not occur until after the administration of many doses. This comes from what seems to be the established fact that both sensibility and the function of absorption may, for a time, be suspended or greatly diminished and suddenly resumed.

These are, perhaps, the most important objections to the use of opium; there are others, minor in degree, but still important. We are usually obliged to trust the administration of our medicines to chance nurses, the relatives, and friends of the patient, who are mortified at his condition, anxious to see him quiet as soon as possible, or they are terrified and restless because the case does not terminate as speedily as they desire. On the one hand, they are apt, after finding that one, two, or more doses do not quiet the patient, to increase the quantity and shorten the intervals between them; on the other hand, they soon begin to doubt the skill of the medical attendant, and to question the propriety of his prescriptions. They are wavering and uncertain in carrying out directions, and the result is nugatory or startling. Knowing all this, the physician is uneasy, and obliged to weary himself with making frequent visits, and his mind is constantly troubled for fear of mishap, or that his treatment will utterly fail.

A further objection to the opium treatment, and the strongest, is the fact that the mortality is greater under it than under some other methods. Great care should be exercised in prescribing it. We should be precise as to quantity and the time which elapses between the doses. We should never, because of presumed insusceptibility of the nervous system and deficient power of absorption, be tempted to ex-

XUM

ceed greatly the ordinary dose, nor should we continue its administration after the evidences of its influence are plainly manifest. It is better that we administer medium doses, and repeat these at ordinary intervals, not permitting our anxiety to see the patient sleep to overbalance our sense of prudence. It is proper that the physician administer each dose; and that he may be reasonably sure that it is absorbed and takes effect, he should introduce it into the system by the use of the hypodermic syringe. There can be no mistake or doubt in such treatment, and we are sure to get the good effects of the medicine without the uncertainty and anxiety which are necessarily experienced when it is administered by the mouth.

Many, however, object to hypodermic medication, preferring the older mode of administration with all its uncertainties—and there is a question as to the form of exhibition.

From the minuteness of the dose and the ease with which it is administered, many prefer morphia—some the liquid preparations, while others are indifferent, so the patient takes opium. The liquid preparations containing alcohol are the most active, because most quickly absorbed; hence laudanum is a popular preparation. It is well to combine even this with some other stimulant, in order that it may be more readily absorbed. I prefer to administer it in connection with capsicum and camphor—the capiscum is preferable in the form of the tincture. Camphor is sufficient in many cases without other influence, but it makes an excellent adjuvant to opium.

Some distinguished practitioners adopt exactly the opposite mode of hastening and securing absorption by combining nauseants, instead of stimulants, with the opiates. With Prof. Gross a sufficient dose of morphia, combined with one-quarter or one-half grain of tartar emetic, is a favorite combination, and it is said to be very efficient, but, one would think, open to the objection of not being applicable in cases where there is considerable debility.

XUM

Such a combination, if used, should be prescribed in the first stage of the disease. It may be useful in the more advanced stages of such cases as may be complicated with congestion or inflammation of some of the organs. It is particularly applicable in cases of delirium ebriosum.

About the year 1851 chloroform administered by inhalation became popular as a remedy in delirium tremens, and it has some advocates at the present time, but it is not so commonly prescribed as formerly. From my knowledge of the results of its use I can not speak favorably of it.

In the year 1850 there were treated in the Charity Hospital, New York, three hundred and sixty-three cases of the disease, and of this number three died. In 1851 there were two hundred and sixty-two cases, and six deaths. In 1852 there were two hundred and forty-four cases, and ten deaths. In 1853, of two hundred cases, ten died. In 1850 the opium treatment was used exclusively, and the number of deaths was three of three hundred and sixty-three cases. In 1851–52, of four hundred and forty-four cases, there were twenty deaths. The patients were all of the same class, that is, of the lowest grades of the city, and the circumstances were the same, except that chloroform was used in a large number of these cases by inhalation, frequently as the sole remedy, but more frequently in connection with large doses of opium, or, more exactly, it was administered after repeated large doses of opium had failed to produce sleep, with a view of forcing sleep, and allowing the opium to have its full effect. It was never known to fail to produce its peculiar effect. The patients, in the course of a few moments, ceased their wandering talk and muscular motion, and passed into a profound stupor, which gradually became a deep sleep, lasting generally from twenty minutes to a half hour, when the patient would wake, appearing more rational than before, perhaps turn in bed, and again fall asleep to awake at the end of an hour, or several hours, in many cases convalescent. In many cases

XUM

it was necessary to repeat the chloroform twice or three times before the patient became quiet, and now and then it happened that as soon as the effect of the anæsthetic wore off the delirium returned, and the case progressed as before. Many brilliant cures were made, but, as we have seen, many cases terminated fatally. Of those who died, some expired almost instantly, as people usually die from chloroform, but the majority after hours of profound stupor—not from the chloroform, but from the opium previously administered. Two deaths occurred under my own observation, in cases in which opium had not been administered, and, as before remarked, the event was, as usual, sudden and unexpected. In one case there were no complications; in the other there was pneumonia.

The facts just stated are, it would seem, sufficient ground for great caution in the use of this powerful medicine, especially in cases in which opium has been previously aministered in large doses. It completely overcomes, in a few moments, the excitement, which lessens the susceptibility of the system to the action of opium, and seems also to cause a change in the functions, by which absorption is allowed to go on, and the cumulative effect of several large doses of the opium is seen almost immediately. It is in this class of cases that there is the greatest temptation to use chloroform. We become weary of the raving and struggles of the patient, and, disappointed in the failure of the opium to accomplish our wishes, naturally seek something to rid us of anxiety.

It is hardly necessary to make more than an allusion to the hazard of administering chloroform in cases in which there are complications, as organic disease of the heart or pneumonia, and in cases where there is a strong tendency toward asthenia.

Within the last ten years, since the discovery of the narcotic property of the hydrate of chloral, that medicine has been extensively used in delirium tremens, alone and in

combination with opium, bromide of potassium, and perhaps other drugs; and, undoubtedly, it has proved beneficial. It has the advantage over opium in acting more quickly and decidedly in this particular condition of the body, in quieting the muscular tremors and in causing sleep. This may arise from the greater effect on the functions of the spinal cord and the nerves of sensibility generally.

It is as often administered alone as in combination, and there seems to be no especially good reason why it should be combined with less active remedies, as the bromide of potassium, in the cases in which the chloral is most admissible. The bromide can scarcely have much effect in bringing about the decided results which usually follow; these may, in the main, be attributed directly to the chloral. This is not strictly true with regard to more decided and powerful narcotics, as opium, for there does appear to be some advantage in combining it with the chloral, especially if the last-named medicine is used in the advanced stages of this disease; for it is not necessary, in order to obtain the desired effect, to administer such large quantities of either, there seeming, as is seen by the combination of many other remedies in prescription, to be a sort of modification of the effects of the remedies by which the action of each becomes less active, but the combination is still potent. I will not say that this may not be as true in regard to the bromide of potassium, but it has not so appeared to me, in noting the effects of its combination with the chloral. I have not seen it stated that the influence of chloral is favorably modified, like that of the opiates, by combination with nauseants.

Chloral is most beneficial in the first stage of the disease, when the patient is suffering, not so much from actual delirium as from the condition which precedes it—that condition of disorder of nervous function and the functions of nutrition, which has appropriately been named the "horrors." At this stage, one or two moderate doses often suffice to end

the case. Chloral is also better adapted to the treatment of cases resulting from the first debauch, or those wherein the strength has not been exhausted by the effects of chronic alcoholism.

It is to be regarded as a hazardous medicine in this latter class of cases, except, as already mentioned, in the outset, and its administration should be conducted with care.

Undoubtedly it is often beneficial, but it is too potent to be carelessly used in conditions of the body where a slight disturbance of balance may bring disaster. If the opinion with regard to its action which supposes it to be decomposed in the circulation, after absorption, and chloroform to result from the chemical change, then the objections to the use of chloroform in a measure hold good.

I can see no reason, supposing what has just been said to be true, why it is not better to administer chloroform in proper shape, and not make the necessity for chemical reaction before the effect desired can be obtained.

There is much difference of opinion as to the quantity of chloral which should be administered. The majority of practitioners seem to prefer to give rather full doses in the beginning of an attack, and repeating frequently until the case is under control. The usual plan is to prescribe twenty or thirty grains, one dose, to be repeated every hour until sixty or ninety grains have been taken, or until the patient sleeps. In many cases one dose suffices, but often the whole sixty or ninety grains is taken before the requisite influence is obtained. The sleep may be satisfactory and the patient may be well, but one never feels perfectly secure when more than sixty grains have been swallowed within a short period. We must remember that absorption may be often imperfectly performed, or wholly suspended, and may suddenly be resumed; that all the medicine swallowed within a number of hours may remain unchanged in the stomach for a consider-

able time, and the whole be taken into the circulation within a brief period with full effect.

Again, the secondary effect of chloral is depressing; it seems especially to weaken the action of the heart, and this forms a decided objection to its administration in large doses when the tendency is toward asthenia, or paralysis of the heart. The tendency toward this mode of termination is the main objection to the use of the remedy in the advanced stages of the disease.

The treatment with the bromides, particularly the bromide of potassium, just now so popular with the profession, has the merit of safety and moderate utility combined.

The bromide of potassium can not be said to be dangerous, and its hypnotic and calmative powers are sufficient in many cases to induce the necessary quiet and sleep.

We hear occasionally of instances in which it acts with unwonted power, not in causing sleep, but in producing sudden weakness and prostration. Such must be cases in which the strength is far spent, or in which the person is more than usually susceptible. In every such instance, so far as known to me, the dose has been very large, and swallowed in strong solution.

A common mistake is in the prescription of doses too small to obtain the good effect of the medicine. Ten or fifteen grains repeated at intervals of two or three hours is useless. We should go beyond the ordinary dose if we expect good results, and begin with from forty to sixty grains, and repeat at short intervals until some effect is observed. The medicine, especially in these large doses, should always be given in dilute solution. It may be given alone or in combination. Frequently something is gained by combining with it an opiate, and of the preparations of opium laudanum is the best.

There is also advantage in using in connection with the bromide camphor, which of itself has great value, and when the stomach is more than usually inactive capsicum, in the

XUM

form of infusion or tincture. The addition of one or another of these adjuvant remedies is often speedily followed by good results, which before seemed not likely to be attained.

The bromide, like other remedies, has best effect in the first stages of the disease, and while so much less powerful than several other remedies, it is relied on as the principal, often the only medicine by many eminent practitioners and in several of the largest hospitals of the country. Like every other medicine, it often fails, but, unlike many others, it does no harm.

We find here and there a member of the profession still adhering to the opinion that alcohol is the main remedy for the cure of the disorders which it has produced; and, to some extent, this is well founded. We find often that, when an attack is pending, the free administration of alcoholic drinks, particularly wines and malt liquors, in connection with the volatile preparations of ammonia, will cut it short and establish convalescence. This is particularly true of persons with whom the habit of drunkenness is comparatively recent, and of those who are much debilitated.

Alcohol is thought also to be more beneficial in cases of the disease occurring in connection with injuries, in which almost uniformly the tendency is toward debility. Many practitioners resort to it from the beginning, and continue its administration until convalescence is established. Some claim that it is peculiarly indicated in this class of cases; but there is no ground for this opinion except what has already been stated, namely, the tendency toward rapid failure of strength commonly observed under such circumstances.

Alcohol does good by one of two influences. In the first place, it may act like others of the so-called cerebral stimulants, as a narcotic, and it is for this effect that it is prescribed in the early stages of the disease, with the frequent good results already mentioned. Although sufficiently powerful as a narcotic to control the disease in its incipiency, it is not effective later, and it is questionable whether its administra-

tion is justifiable, unless it be to fulfill the second indication for its use, namely, to strengthen the action of the heart, and assist in preventing death by asthenia, avoiding sudden prostration and paralysis of the heart.

Perhaps this indication might be fulfilled as well by other medicines, as camphor, but the effect of alcohol is so well known, and has been so thoroughly tested, as to cause us to hesitate in substituting for it any thing which we do not know to be equally reliable.

It does seem a little contradictory, that we prescribe as a medicine the same agent which has brought upon our patient his disgrace and degradation, and perhaps we are amenable to the code of morals on this score.

The treatment with large doses of digitalis proves nothing, except that the medicine may be taken with impunity under certain conditions of the digestive and nervous systems in quantities formerly considered deadly. Although many patients recovered, perhaps more promptly than under some other modes of treatment, escaping the dangers both of the disease and the poison, so many died as to cause alarm and the disuse of the remedy.

What has already been said concerning the state of the function of absorption, and the impressibility of the nervous symptoms, will perhaps explain why the enormous quantities of this active drug produced so little of its characteristic influence.

ART. III.—*A New Principle in the Application of the Obstetric Forceps.* By SAMUEL D. TURNEY, of Circleville, Ohio, Adjunct Professor of Obstetrics in Starling Medical College, Columbus, Ohio. Read before the Central Ohio Medical Association.

It has been but a few years since all medical authorities agreed in advising the use of the obstetrical forceps only when the life of the child or of the mother was seriously endangered. Acting upon this teaching, the woman was often

left in the second stage of labor until on the verge of exhaustion, and only when death seemed inevitable without instrumental interference, the attending physician reluctantly applied the forceps. From the long-continued pressure of the head of the child, and the disturbance of circulation incident to these protracted labors, followed a train of evils—fistulæ, cellulitis, peritonitis, and abscesses—which, on the *post hoc propter hoc* theory, were illogically laid to the account of the instruments.

A better acquaintance with the true cause of these diseased conditions has at length exonerated the forceps from these unjust charges, and the physician of to-day knows that in their timely and skillful use lies safety for the mother and child.

But although fairly exonerated from responsibility for most of the diseases which follow child-bearing, there is one injury which very frequently accompanies, and which is undoubtedly often due to, forceps delivery. This is laceration of the perineum. Even when the greatest care is exercised to avoid injurious haste, and to make traction only in the line of the curvature of the inferior strait of the pelvis, laceration of the perineum is, I think all physicians will admit, very common in cases terminated by such instrumental means.

Is this accident unavoidable? Is it justly chargeable to the use of forceps, or is it due to a faulty mode of using them?

To consider these questions, let us briefly look at the mechanism of the passage of the head of the child through the vulva. In unaided natural delivery, toward the termination of the second stage of labor, with each contraction of the uterus the head presses upon and distends the perineum; as the pain subsides the head recedes, and during the interval of repose, the perineum, freed from distending force, recovers a portion of its elasticity and partially recontracts.

This process of alternate distention and contraction goes on for a longer or shorter period, until the perineum, losing rigidity, allows of the full dilatation of the vulva, and the child is born; or the perineum remaining rigid, the expulsive efforts becoming progressively more powerful, it gives way, and we have some form of laceration. In these cases of natural delivery there is a disproportion between the expulsive force and the dilatability of the perineum, and whatever increases that force in this condition of the perineum increases the danger of its laceration.

The ordinary mode of using the obstetrical forceps, when the directions laid down in systematic works on obstetrics are followed, does this, and is, consequently, a very frequent cause of this injury. The universal teaching, so far as I know, in the use of these instruments is, if there are uterine pains to make traction during the pain—that is during the expulsive effort—this rule, probably all right when the head is in the cavity of the pelvis, is, I think, all wrong when the head is at the outlet.

This increase of expulsive force is, I believe, a capital error, and a source of much mischief. Believing this, I have for some years adopted an entirely different mode, making little or no traction during the pain, but in the interval of the pain using enough traction to prevent recession of the head of the child and holding it firmly against the perineum. This prevents a recontraction of the perineum, and converts a violent intermittent distensive force into one which is slowly acting and persistent. Under this moderate but constant pressure the perineum surely and safely dilates, and laceration is avoided.

I have been satisfied with the results of this practice, and think the rule in the use of the forceps, when the head is pressing upon the perineum, should be reversed, and should stand: *Make no traction during the pain; let the traction be made in the interval of pain.*

XUM

ORIGINAL LECTURES.

ART. IV.—*The Female Pelvis.* A Lecture delivered in the Preliminary Course of 1876, Starling Medical College, Columbus, Ohio. By H. G. LANDIS, A.M., M.D., of Niles, Ohio.

To consider the female pelvis properly, it is necessary to do more than become familiar with what might be called its surface anatomy. It must also be studied with special reference to its functions, and the relations it bears to the child. This is, for the most part, true of any part of the human organism.

You will not proceed far with your studies before discovering that anatomy, regarded only as a study of names, is a dry and profitless task; but when a knowledge of the uses and relations of parts is added, it becomes a pleasant, and even fascinating, pursuit. This is conspicuously true of the pelvis. Regarded only from an anatomical stand-point, it is a rather intricate and puzzling frame-work; but when we discover its real uses and the reasons for its peculiar shape, it becomes one of the simplest and most to be admired exhibitions of the wisdom of the Master Builder.

Without further preliminaries, we will proceed at once to its investigation. The pelvis takes its name, as you are aware, from a fancied resemblance to a basin, and is also divided into two parts or basins—the upper, or false, and the lower, true or obstetric pelvis. With the upper division, which is, as you see, very incomplete, we have little to do. It is made up by the wings of the ilium and sacrum on either side, and the vertebræ posteriorly. These wings give attachment to muscles which, either in substance or by their tendons, pass through the pelvis. They are also of importance as affording protection to the viscera. In the sitting or recumbent posture, they do, indeed, serve to some extent as a basin in which the contents of the abdomen may lie, and in

this way they may be said to act as a cushion for the gravid uterus. But in the erect posture, which is, of course, the most common one, they are almost perpendicular, and furnish no support whatever. This will become more apparent in our study of the real pelvis, to which we shall now confine our attention.

The real pelvis begins above, in a complete, bony ring, into which three bones enter—the sacrum, ilium, and pubes of either side. The dividing line is called the linea ileo-pectinea, and is continuous from the spine of the pubes around to the sacral promontory. This is generally known as the superior strait, and is the entrance of the passage through which the child is propelled in its delivery. Although I have called this a ring, you will at once perceive that it is by no means regular, having an outline which is frequently compared to the ace of hearts. You will further notice that the component parts of this ring are not in one plane surface, although they are generally regarded as being so in most, if not all, text-books. Leishmann goes so far as to state that their being in one plane is a peculiarly human attribute. But on inspection we find that a line drawn directly across it, from one ileo-pectineal line to the other, is quite a distance below the level of a line drawn from the sacral promontory to the top of the pubes. There is, therefore, no one plane for the pelvic brim. If, holding the pelvis horizontally, we begin in front and follow up the ileo-pectineal line, we shall find it nearly in the same horizontal plane until it reaches the sacro-iliac joints or symphyses on either side, after which it gradually rises until we find its continuation on the sacral wings running upwards and forwards into the promontory. The linea ileo-pectinea is therefore in the same plane throughout its entire length on either side, but the two planes which these lines subtend intersect each other in the median line. Thus we have two planes instead of one. What, then, is the reason for this? or is there any reason why we should insist

on observing this variation of the pelvic entrance from one plane surface? As was intimated before, the knowledge of the uses of a part are necessary to a complete understanding of its anatomy; and I would remark, in passing, that there is very little about the human body that is without use or reason, if we could but find it out. The child's head passes through this strait, and the strait ought, therefore, to bear some definite relation to the head. Let us, then, take a transverse section of the child's head as it usually enters, and learn in what manner it corresponds with the passage provided. We shall find this section to be of an elliptical outline, and on applying it to this ring, we shall also find that one side of it completely corresponds to one side of the pelvis, leaving a space to one side and behind. And so we may apply it in like manner to the other side, with the same result. As the professor of obstetrics will also tell you, the child's head may and does enter in one of four ways—either with the occiput in front, and to the left or right, or posteriorly, and to the right or left; in other words, with its long diameter coincident with the long diameter of one or other of these two elliptical divisions. Putting these links together, we may now see why the strait of entrance to the pelvis is of this shape, viz., a double ellipse, or rather composed of two elliptical openings, partially fused together, and precisely coincident with two similarly overlapping sections of the fœtal head. It is in order to permit of this variety of positions for the easy entrance of the head. For our present purpose we may leave out of sight the consideration of its adaptation to breech presentations, though it is apparent that the breech is similarly elliptical in outline. There is another reason. You will notice that the long axis of the child's head is at right angles to that of the shoulders. If, then, a head passed through an ellipse of similar size, it is obvious that before the shoulders could pass through the same figure, there must be a rotation through an arc of 90°;

that is, if the long diameters of the shoulders, head, and ellipse were nearly of the same size, which is substantially the case. But in the pelvis this is provided for by this arrangement of two canals, so that the head, having descended through one, the shoulders may follow in the opposite one without inconvenience. We will notice that in these two ellipses the long diameters correspond with what are called in the text-books the oblique diameter of the superior strait. These diameters are not given exactly alike by all authors. According to Meadows, they are drawn from the sacro-iliac symphysis of either side to a point opposite the pectineal eminence of the other side. They form with each other an angle of about 80°, and with the median line an angle of about 40°. Remember, also, that these two planes are inclined towards one another at a considerable angle, and that, therefore, the *axis* of each plane is directed downwards, backwards, and inwards. The inclination of these axes to the median line is at least 40°. These planes are bounded by a line corresponding exactly to the ileo-pectineal line, which the generally asserted plane of the superior strait does not. We shall further find that clinical experience as to the direction of the child's head in passing through the entire pelvis coincides with these statements. I dwell at some length on the shape of the pelvic inlet, because it explains the whole pelvis when rightly appreciated.

Let us now turn to the outlet. Here is another ellipse, bony in front, being bounded by the pubes of either side, and, further back, the ischia. In the posterior half it is limited by the sacro-sciatic ligaments; and at the extreme tip is the coccyx, capable of considerable motion backwards. Its long diameter is in the median line of the body, and its short diameter, therefore, at right angles to that line. There are, however, some points of difference between it and the inlet, irrespective of the fact that we have here but a single mode of exit, while above we had a double mode of entrance.

XUM

And first, though it is of the same shape as the child's head, the diameters are all comparatively large, whereas, at the inlet, the fit was a pretty snug one; also, it is only in its general outline that the outlet is elliptical. There is no well-defined bony rim, such as we found at the inlet. You will find in the text-books the statement that the long or conjugate diameter of the outlet or inferior strait extends from the subpubic ligament to the tip of the coccyx, and its transverse diameter from one tuber ischii to the other—points which are by no means on the same level. To speak in the same breath of the plane of the outlet, is rather inconsistent. We have, however, no practical grounds on which to reject it entirely, but it is well to recognize its entirely artificial character. This outlet is the bottom of the pelvis, and its distance from the inlet is the measure of the depth of this basin. The average depth of the pelvis is from four to five inches. It must not be forgotten that in the recumbent position the general plane of the inferior strait is perpendicular, and that the bottom of the pelvis looks forward.

I now ask you to follow me in a short course of reasoning. If the child's head corresponds closely in shape to the canal through which it passes, or rather if a section of the head represents the caliber of this canal, the direction and longitudinal shape of the canal may be found by observing in what manner the head passes through it. If the beginning and end of the canal are elliptical planes, the whole canal is no more than a continuous succession of similar planes. We have seen that the head invariably enters the pelvis with the long diameter of its elliptical section at an angle of 40° with the median line, and emerges from the pelvis with the long diameter coincident with that line. Therefore, in traversing a canal, say four and one-half inches long, it has moved laterally through an arc of 40°; or, in other words, the motion has been spiral, and the canal is likewise spiral in shape. I said the head *invariably* entered in this position. The early

writers of this and the preceding century placed scarcely any limit on the original positions of entrance; and at first sight there appears to be no reason why the head should not enter in the transverse diameter of the whole pelvis. But it has long since been found to be a clinical fact that it seldom, if ever, does so enter, and late writers now disregard any other *natural* positions than those already mentioned. We now see the mechanical reasons for this. In screwing a bolt into a nut, the screw must be started and maintained in a certain way. The thread of the screw must correspond to the thread of the nut; and so in the pelvis: the head is to be propelled along a spiral course, and must enter with reference to this fact. To recapitulate the facts already learned: The pelvis is a partially double spiral canal, *i. e.*, having a double entrance and but a single outlet. We can now study it in detail, having obtained a general knowledge of its form and uses, and in so doing we will first endeavor to find out where the double canal first becomes a single one, or, in other words, where the line of fusion is. If we look into the pelvis from above, we notice most prominently two decided projections of bone, which are evidently the limiting points of the transverse diameter of the outlet; for, though these points are a little higher up in the pelvis, it is evident that any thing which can pass between them can pass further down. They are the "narrows" of the pelvis. These are the spines of the ischia. You will notice that lines drawn from the margin of either initial ellipse, and nearly parallel to its axis, strike both of these points. They are, therefore, the limit of direction in this axis; and it is at this point that the two canals are fused into one. Thus you see that, so far as the bony parts are concerned, the double character of the pelvis is well nigh entire. A very narrow rim at the outlet is the only part which is completely single in structure. This, however, is enough to determine the subsequent direction of the child's head. When the soft parts are added, the single

canal is found to be quite as long as the double ones, but upon this we shall not have time to dwell at present.

On close inspection we shall notice a rather poorly defined line running upward from the ischial spines of each side to that point on the ileo-pectineal line opposite the acetabulum. This line divides the pelvis into two parts on each side. Those in front are designated as the anterior inclined planes, and those behind as the posterior inclined planes. These planes, whose direction is, as you see, nearly opposite, are important in determining the direction of the passing head; but this line is in one sense the measure of the resultant forces of the two sets of inclined planes; in other words, is the thread of the screw along which the head moves. If this were a groove or depression instead of an elevation, we might say that the pelvis was rifled. We are now prepared to make another general conclusion. Although the spinal course along which the head moves is a continuous succession of elliptical planes, the circumferences of these planes do not offer the same amount of resistance throughout to the passage of the head. Unlike a uniform metallic tube, there are certain points of more important influence than others. As we see, a large portion of the pelvis is destitute of bone. The large obturator foramen in front, and the sacro-ischiatic foramen behind, even though filled up with other tissues, offer very little resistance, and the sacro-sciatic ligaments are quite elastic when compared with the firm bone. The head in passing through meets with the most resistance at two places: First, at the beginning. As we have seen before, if the head fits at all closely it must enter with considerable exactness; and you will learn in your further obstetrical studies that it is at the brim, *i. e.*, at the beginning of the course, that the principal delays in labor take place. Secondly, at the ischial spines occurs the greatest resistance; at the beginning of the single canal, the second point of entrance.

Let us now notice another fact. The ilium, ischium, and pubes may be said to contribute almost equally to the anterior portion of the pelvic canals, but the posterior half of the pelvis, so far as its bony frame-work is concerned, is made up exclusively of one bone, the sacrum, and its continuation, the coccyx. It would be well, therefore, to scan this bone somewhat carefully. In looking at it *in situ*, we may notice that its borders, below the level of the inlet, run quite accurately in the direction of the axes of the canals on either side, viz., downward, backward, and inward; while its central surface presents a flattened aspect, upon which the free sides of the two canals are merged. This flattened central surface, which really is a measure of the mean direction of the two, has been generally regarded as parallel to the axis of the whole pelvis, as indeed it is, but I think we have seen that the pelvis should not be considered as a whole. It is, indeed, useful and necessary to remember the direction of this sacral surface; but I repeat that you will find, clinically, what we have asserted as the result of this anatomical study, that the child's head does not move in the axis of the whole pelvic cavity, as the text-books assert, but that it does move in one or other of the axes of the two opposite canals of which the pelvis is composed. This sacral axis is, for almost the first half of its course, nearly in a straight line downward and backward, after which it takes a nearly parabolic course in a generally downward and forward direction. In this connection, we may again notice that the line running upward from the ischial spines to the ileo-pectineal eminence is almost, if not quite, parallel to the sacral edge of the same side, and in one direction parallel to the general axis of the whole pelvic cavity. But you can not fail to see the inward direction as well, and its parallelism with the real axis of either side.

The spirality of the pelvis has frequently been noticed, at least incidentally. Hodge, who has brought the present

teachings of the mechanism of labor to its highest point of scientific excellence, could not fail to notice the spiral motion of the head. But the disregard of the doubleness of the pelvis, and the consequent inward direction of the pelvic axes, has led to frequent absurdities in teaching. I should not allude to these absurdities for the mere purpose of claiming priority in discovering them, but I am well convinced that their perpetuation is inevitably connected with erroneous and cloudy ideas of the pelvis. Take, for a moment, a fœtal head; place it in the first position of the vertex, and let it descend strictly in what all authors agree to call the axis of the pelvis: I think you will agree with me that, before it can be born, the ischium must be removed.

A word now as to nomenclature. I have purposely refrained from calling particular attention to the names of the parts we have been studying, or even naming at all the canals we have found, deeming it better that you should first see the uses of an object, and, having thus a definite knowledge of it, be forced to find out its name, in order to speak or think of it. I fear that the student is too often content with learning the names of parts that he may *appear* to know something of them on the day of examination. I have, however, taken it for granted that the names of the bones and ligaments which compose the pelvis are not altogether unfamiliar to you. The pelvic canals, then, may take their names from the so-called oblique diameters, which are their long diameters. Unfortunately, what American and French authors call the right oblique diameter, English and German authors call the left oblique. The one name it from the sacro-iliac symphysis, from which it springs; the other from the acetabulum. We will notice that the diameter our countrymen call the left oblique is the long diameter of that canal which lies principally on the right side of the pelvis; *i. e.*, its bony walls are greatly in excess on that side. I think, therefore, although it is the Centennial Year, we had

better desert to the English and German side, and call this the right canal, and its beginning the right superior strait; this the left canal, and its beginning the left superior strait; for it is better to be right than American. The right canal is a little larger for two reasons: First, because it shares in the generally better development of the right side of the body, though Schweighaüser, as quoted by Schrœder,* attributes it to a somewhat different cause; secondly, because the rectum encroaches a little on the left side. The difference is, however, so slight that a head has, usually, little more difficulty in descending through the left canal.

Besides understanding the uses of the various parts of the pelvis and their relations to each other, it is well to understand their relation as a whole to the rest of the body. The pelvis does not usually lie in this flat position, as we would certainly imagine at first sight. It is, when the body is erect, inclined at an angle of about 60°, so that the anterior face of the pubes is turned downward until it is almost horizontal. To comprehend why this is so will lead us next to consider another function of the pelvis. Besides serving as a passage-way for the child, the pelvis has a more important use—more important because it is a permanent one, while the parturient function is only occasional; nor could the latter be performed without the former. It serves also to transmit the weight of the body to the lower extremities. The weight of the body is transmitted to the vertebral column as far as the pelvis; for all parts of the body above this point have a more or less direct connection with the vertebral column. The sacrum, therefore, in a measure, supports the weight of the body, which is a sufficient explanation of its massive proportions. This weight is thence transmitted to the acetabula, where the femora upon each side divide the burden. If we look at a male pelvis, we shall see that to transmit this weight there is a nearly straight beam from the

* Manual of Midwifery, p. 3.

XUM

sacral promontory to the acetabulum; and this is all that is needed. It has the greatest amount of strength, and there is room between the beams to contain all the necessary viscera. The infant pelvis of both sexes is substantially the same in structure. But if the female pelvis were thus constructed, there would not be room enough. Here the beams are replaced by two outward curving arches, extending from the same points. A large joint divides each arch to the sacral side of their centers, viz., the sacro-iliac. This joint has a double purpose: First, as in the male pelvis, it diminishes the liability to fracture of all the bones forming the arch or beam; and, secondly, it allows of motion in two ways: first, of a separating motion which would increase the size of the pelvic cavity; and, secondly, of a to and fro motion of the sacrum which allows of changes in the equipoise of the body.

There are many interesting facts concerning the mechanism of these joints, in connection with the sacrum in general, which have been brought to the notice of the profession principally by J. Matthews Duncan, whose works I recommend to you as not only furnishing valuable information, but as tending to awaken habits of thought and research, which will be still more valuable.

There are two ways of regarding the sacrum from a mechanical stand-point: as a keystone of an arch, or a wedge, which is substantially the same thing. It certainly is a wedge in shape. It is four and a half inches wide at its base, and in a length of four and a half inches tapers to less than an inch in width. It is wedge-shaped, also, in its lateral aspect; and more important than this, it is wider in front than behind, and therefore shaped as a keystone in that respect. You will also notice that the posterior half of the pelvis seems to form a somewhat irregular arch. At this point many have jumped to the conclusion that the sacrum was the keystone of this arch, which, as you will presently see, is a great error. In the first place, the keystone is upside

down. The back of the sacrum is really the top of it, and the direction of pressure is, therefore, more from behind than through the length of the bone. In the second place, there is no true arch in the pelvis, as a whole. The duality of the pelvis is borne out here as well as in its parturient functions. Hence the two arches to which your attention was called a a moment ago. The sacrum, then, when the body is erect, does not slide between the ilia as a keystone, but is supported and fastened to them by these stout sacro-iliac ligaments, so that it swings between them, in a manner, as if hung on a pivot. This is a much more elastic, and I might add comfortable, arrangement than would result result from the jarring motion of a keystone jammed between solid, bony supports. But while you notice the length of the sacrum, and the easy manner in which it is swung at the top of the pelvis, you will also observe that there is danger of too much rocking motion. This is prevented by belaying the sacrum, so to speak, by the sacro-ischiatic ligaments, which keep it from tilting too far back. These facts are not without some practical value; for, although the mobility of these joints during labor is doubted by some, I am persuaded that so capital a contrivance would never have been furnished by the Great Architect for any purpose, if the purpose was not to be fulfiled Thus, when the head is entering the pelvis, any thing which will separate the sacro-iliac joints will, of course, facilitate that entrance; and when the head has descended further, any thing that will stretch the sacro-sciatic ligaments will similarly enlarge the lower portions of the pelvic cavity by allowing the sacrum to be pushed back. This would suggest that at the beginning of labor the recumbent posture is the more favorable for the entrance of the head, so far as the pelvis is concerned, and that as the head advances the side posture is preferable, insomuch as it allows of the more free extension of the sacrum and coccyx. There is in women much difference as to mobility of these joints. If they are nearly

XUM

or quite anchylosed, of course a change of position would have no influence; but I have too often seen a tedious labor speedily terminated by a change of position not to know that the mobility of the sacro-iliac joints can frequently be turned to advantage. I need scarcely say that motion in either of them would be impracticable if it were not for this large joint in front, the symphsis pubis, which, to some extent, serves as a hinge-joint.

We have thus briefly passed in review the essential points in the physiological anatomy of the normal pelvis, and I doubt not that all you may learn in future of the mechanism of labor at the bed-side will corroborate these views. If time permitted, it would be no less useful to study pelves which are not normal, and to find out if deformities follow any definite laws. One remark in this direction is all that need at present be presented. If one of these sacro-iliac joints should become anchylosed in youth, one side of the pelvis would be obliterated for parturient purposes; for, as the arch is formed during the period of growth, its development would of course be stopped. A similar condition is diagrammatically represented in figure 17 of Schroeder's Manual of Midwifery, which illustrates very well the original doubleness of the pelvis, and the possibility of child-birth with the obliteration of one-half of the pelvis.

CLINICAL RECORDS.

ART. V.—*Case of Severe Hæmorrhoids successfully treated by Galvano-Caustic.* By W. M. CHAMBERLAIN, M.D., of New York.

The patient first consulted me in the spring of 1874. She was a slight, pale woman, about 30 years of age, and of highly nervous temperament. Her account of herself was such as

is common in cases of aggravated hæmorrhoidal tumors, and examination shows a large mass of internal piles, ulcerating and much inflamed. Rest and cooling applications were advised until the temporary aggravation should subside. The operation for removal was urged upon her, and she promised to return, but failed to do so, and I saw her no more until the 17th of February, 1876. Her appearance had greatly changed for the worse. She was extremely anæmic and haggard; her lower limbs were œdamatous. She told a story of frequent and frightful losses of blood; of a mass protruding at every slight movement; of distressing tenesmus. She stated that from six to ten movements of the bowels occurred daily, always attended with more or less bleeding, of palpitation, muscæ volitantes, fainting fits, and other phenomena of anæmia. Examination revealed the largest mass of hæmorrhoids which it has ever been my fortune to see. The protruded portion was equal in size to the half of a large orange, that is, it was from $2\frac{1}{2}$ to 3 inches in each of its horizontal and in its vertical diameters, composed of five more or less completely divided lobules. Its surfaces were of a dark purple color. There was but little hypertrophy of the connective tissue. The tumor consisted mostly of a congeries of dilated veins, extending as high as the internal margin of the sphincter ani, around which was felt, as it were, a ring of enlarged arterial trunks, pulsating with a force equal to that of the brachial artery. A "collateral" circulation had thus been developed to supply the waste going on daily for years. It was evident that medical methods would not suffice for a case so aggravated, and surgical management presented very considerable difficulties. Direct excision would certainly be attended with a hæmorrhage too hazardous to a patient already exsanguinated to such a degree. The eraseur, clamp, or ligature would be followed by an ulcerating surface too extensive to be safe to a person so cachectic. Some secondry hæmorrhage might be

XUM

anticipated, possibly thrombosis, phlebitsis, and pyelitis, one or all. Separation of such a mass would be slow and the pain intolerable.

I had recently read in Braithwaite for January, 1875, a paper credited to the London Medical Record, of May 20, 1874, describing the method of reducing the size of hæmorrhoids intractable by other operation—by linear cauterization of the anus. In this paper cauterization is described as consisting of four lines radiating from a point one centimetre (.38 of an inch) within the margin of the anus and extended to the cutaneous surface. The instrument employed was a knife-shaped steel cautery brought to white heat in a furnace. The proposer of the method was M. Worllemier, of Paris. The mode of cure is represented to be by contraction of the cicatrices and a consolidation of subcicatricial tissue—the result of heat directly applied.

It seems to me that the effect of the operation would be much increased by extending the lines of cauterization over the whole face of the tumor, and from previous experience with the cautery, I did not recognize difficulty or danger in so doing; and the galvanic wire was certainly to be preferred to any furnace implement.

Prof. Piffard, whose galvano-caustic apparatus is certainly as neat and effective as any which has been given to the profession, kindly offered to operate the battery for me. As the application would require but very little time, nitrous oxide was chosen as the anæsthetic, and was administered by Dr. David Goodwillie. Unconsciousness was secured in about one minute. The tumor, which had been protruded as far as possible by the efforts of the patient, was further everted by forcible pressure from three fingers of the left hand passed into the vagina, according to Stover's proceeding. Having bent the loop of platinum wire so that the two strands, lying parallel and in contact with each other, followed the spheroidal surface of the tumor for about two and

a half inches from the cutaneous margin of the anus to within the sphincter, the current was turned on, the wires, raised to a dull red heat, were allowed to sink into the surface, previously carefully dried. The operation was repeated five times, along the middle line of each hæmorrhoidal lobule. A cord of condensed tissue was found to lie beneath and around the line of each eschar. The parts were then oiled and returned into the rectum, and a cold water ocmpress applied. Morphia administered hypodermically. No hæmorrhage followed, and the pain was inconsiderable. The following day there was some traumatic fever, the tumor was increased in size and more painful. The sloughs came away on the fifth day, and progressive diminution of the mass continued, until twenty days later the reduction was estimated from one-third to one-half. The comfort of the patient had increased in a similar ratio. There had been no bleeding. The question then arose whether the operation should be repeated. It seemed probable that two more such cauterizations might practically cure the case, but the mass had now become so much less vascular, so much more firm, that I did not hesitate to undertake the entire removal at one sitting.

This was done by encircling in detail each of the five lobules with the wire loop, heating it to redness and tightening the wire. There was no hæmorrhage. The after treatment was simple—oiled compresses, hypodermic morphia, and restraint of the bowels for six days. There was less pain after the second than the first operation. The slough separated in five days, leaving a smoothly granulating surface, which was kept carefully clean until it cicatrized. A fortnight after, the parts showed hardly a trace of the operation; there was no cicatricial hardness, the functions of anus and sphincter were painless and perfect; the bowels moved easily once a day. I have to-day (September 12) examined this patient. The parts remain in a quite normal condition.

XUM

There has been no trouble or difficulty of any kind. There is nothing to suggest reproduction of the tumors.

This case is interesting mainly for the result of the first operation, which showed, so far as a single case can show, that tumors composed mainly of venous tissue may be diminished in size, not merely by the amount of tissue brought to the state of an eschar, but beyond that by a contractile influence resulting from the burn. When the heated knife or wire divides a mass of vascular tissue, bleeding is prevented by a coagulation of all the albuminoid elements in the blood and in the tissue. A plug of hardened albumoid substance occupies the lumen of the blood vessels for a certain distance on either side of the line of division. The circulation in the tumor is thus obstructed, and a certain amount of atrophy is the result. For the repair of destroyed surfaces, nature produces a local hyperinosis and effused fibrin always retracts. Thus it would seem that we have in preliminary cauterization a means of reducing the size and vascularity of hæmorrhoidal tumors when those conditions lead us to hesitate about a radical operation, and that a radical operation, thus preluded, becomes less grave and more satisfactory.

68 West Fortieth street.

ART. VI.—*Case of Severe and Complicated Wounds.* By J. C. KROESEN, M.D., Columbus, Ohio.

Mary Childs, æt. 44; married; has never borne children; has usually enjoyed excellent health.

On the 10th day of May, 1875, she was suddenly attacked by her insane nephew, armed with a pistol and a razor, who inflicted upon her head, shoulder, and abdomen the following described wounds:

Wound No. 1.—Commencing about one inch above the middle portion of the right supra-orbital ridge, and extending downwards and across the face; passing over the nasal bones, and reaching to a point beneath the left eye corresponding

to the inferior portion of the malar bone. Throughout the greater part of the wound the weapon glided to the bone.

Wound No. 2.—Small punctured wound on upper and middle portion of frontal bone. Evidently made with the hammer of a pistol.

Wound No. 3.—Beginning about one and a half inches behind the outer canthus of the left eye, and running backwards for a distance of about three and a half inches; passing through the fossa of anterior helix of the ear; severing the middle temporal in its course. The hæmorrhage from this wound was considerable.

Wound No. 4.—Commencing near the middle portion of the left infra-orbital ridge, and extending downwards and outward about an inch and three-fourths.

Wound No. 5.—Commencing just to the rear of the left acromion process, and extending downwards and inwards, passing across the spine of the scapula. Length of wound about four inches.

Wound No. 6.—Beginning near the seventh and eighth ribs of the left side, and passing slightly downwards and across the epigastric region for a distance of eight and a half inches, dividing the costal cartilages and penetrating the cavities of the abdomen and stomach; the wound through the walls of the stomach being about two and a half inches in length, and situated on the anterior aspect, and about half way between the greater and lesser curvatures. The wound in the abdominal walls had the appearance of having been caused by more than one stroke of the razor, for an incision was observed about an inch below the first one described, into which it converged, and was finally lost at the point of entrance to the abdominal cavity. There was considerable and persistent hæmorrhage at the wound in the stomach from branches of the gastric, which was finally controlled by the application of common table salt to the parts. The transverse colon, and portions of the adjacent parts,

XUM

protruded through the wound, over which had escaped the greater portion of the stomach's contents from the wound in that organ.

Treatment.—The temporal artery was first taken up, and the exposed viscera carefully sponged, and hæmorrhage restrained. The mucous membrane protruding through the wound in the walls of the stomach was carefully returned, and the lips of the wound brought into coaptation. Silver wire sutures were inserted about half an inch apart, the wire ends clipped close and turned down. The viscera was then returned within the cavity of the abdomen, and the wound in the abdominal walls dressed with wire sutures and adhesive plaster.

The wounds upon the head and shoulder were dressed in the usual way.

Half a grain of morphia was administered per oram before the wounds were dressed, and about one-half grain an hour afterwards. Patient rested well until about 8:30 P.M., when she grew restless. A half grain of morphine was then given hypodermically, which soon produced the desired effect of the drug. Pulse 100; temperature 98.

May 11. Patient rested well through the night until 4 A.M., when a dose of morphia was given by the mouth; this the patient threw up; another dose was given, which was retained. 7 A.M.—Patient resting quietly; no pain; has micturated freely; has some thirst, which is allayed by small pellets of ice. Pulse 100; temperature 98; respiration 16. 10 A.M.—Patient resting well. Pulse 104; temperature 98; respiration 16. 1:15 P.M.—Patient quiet; takes pellets of ice occasionally; no pain; answers questions; no swelling perceptible about the wound in the abdomen, which has a favorable appearance. The wounds on head appear to be healing rapidly by the first intention. Pulse 104; temperature 98; respiration 16. Gave $\frac{1}{2}$ gr. morphia hypodermically. 7 P. M.—Patient complains of slight pain in left

side; external appearance of wounds good; has some thirst, for which ice is given; has some desire for nourishment; a small quantity of coffee was allowed. Pulse 110; temperature 99; respiration 16. Hypodermic injection of morphia, gr. ½. 10 P.M.—Resting quietly; pulse 108; temperature 99; respiration 16. No pain; a morphia powder left to be administered during the night.

May 12. 6 A.M.—Patient somewhat restless; has a slight cough at intervals; wounds healing rapidly on face and shoulder; wound in abdomen discharging favorably; a slight swelling and tension observed over the pyloric portion of stomach. Pulse 120; temperature 101½; respiration 15. 10 A.M.—Patient somewhat restless; labored respiration; swelling over pylorus portion of stomach still marked; no increase; micturated freely. Pulse 140; temperature 102; respiration 14. Dose of morphia administered hypodermically. 1:15 P.M.—Resting well; takes ice; one or two spoonfuls of coffee; no apparent change in the condition of the wounds. Pulse 136; temperature 100½; respiration 16. 3:40 P.M.—Pulse 134; temperature 99½; respiration 16. 6:15 P.M.—Patient restless; a little beef tea prescribed. Pulse 140; temperature 100½; respiration 19. 10 P.M—Pulse 136; temperature 100; respiration 24, and labored; has urinated freely; moans as in pain; 1 gr. of morphia administered hypodermically; no perceptible increase in the swelling over the stomach.

May 13. 5 A.M.—Patient rested quietly through the night until 4 A.M., when she became restless; has difficulty in swallowing; respirations labored and unsteady; coolness of extremities; bowels slightly tympanitic. Pulse 135; temperature 101; respiration 24. ¼ gr. morphia given hypodermically. Patient rested well until 7 A.M., when she died.

XUM

CORRESPONDENCE.

211 WEST THIRTY-EIGHTH ST., NEW YORK, Sept. 18, 1876.

DEAR DOCTOR: The International Medical Congress, which was formally opened at noon on Monday, the 4th day of September last, in the University of Pennsylvania, Philadelphia, Pa., closed its arduous labors Saturday, the 9th inst., after listening to an excellent address on Medical Education and Medical Institutions in the United States, by N. S. Davis, M.D., of Chicago, and a valedictory by Prof. S. W. Gross, the Nestor of American surgery, who so ably presided over the deliberations of this most distinguished body of physicians, who, for the first time in the history of this Republic, assembled to participate in our Centennial rejoicings, and for interchanging views on the most important subjects connected with the well-being and happiness of the human race. I say the happiness of the human race; for where there is no enjoyment of health there can be no happiness.

The men congregated in Philadelphia from all parts of the world to discuss the questions of prevention, causes, nature, and cure of diseases, deserve the compliment of having their names and deeds recorded in your valuable Journal. In accordance with my promise given you when I had the pleasure of meeting you in Philadelphi, I transmit to you some notes on the proceedings of this Congress.

The first meeting, on Monday, the 4th inst., took place at twelve M., after prayer by the Rev. Wm. Bacon Stevens, M.D., D.D., LL.D., Bishop of Pennsylvania. An address of welcome was delivered by Prof. S. D. Gross, President of the Centennial Commission. The number of delegates by this time was over four hundred, from different parts of the United States, and seventy from foreign countries. Among the

latter were some of the most renowned medical men of England and Canada. It would be out of place to give you all the names of the delegates, but I will name some whose standing is recognized in the profession, to give those of your readers who were absent an idea of the great talents that adorned the halls of the University chapel, where the meetings were held. We had with us Wm. Adams, Esq., F.R.C.S., of London, England; John L. Atlee, M.D., Lancaster, Pa.; Washington L. Atlee, M.D., Philadelphia; Fordyce Barker, M.D., New York City; Robert Barnes, M.D., London, England; Roberts Bartholow, M.D., Cincinnati, Ohio; John S. Billings, M.D., U.S.A., Washington, D. C.; Henry I. Bowditch, Boston, Mass.; John H. Brinton, Philadelphia; W. H. Brouse, M.D., Prescott, Ontario, Canada; T. Lauder Brunton, M.D., London, England; A. H. Buck, New York City; L. D. Bulkley, New York City; T. J. Bumstead, M.D., New York City; W. Burt, M.D., Paris, Ontario, Canada; Wm. H. Byford, Chicago, Ill.; Francis W. Campbell, M.D., Montreal, Canada; Wm. Caniff, M.D., Toronto, Canada; Robert Brudenell Carter, Esq., F.R.C.S., London, England; J. Solis Cohen, M.D., Philadelphia; J. C. Dalton, M.D., New York; John Davis, M.D., Cincinnati, Ohio; N. S. Davis, Chicago; Richard Davy, Esq., F.R.C.S., London, England; Pierre Debaisieux, M.D., Louvain, Belgium; Stephen Dodge, M.D., Halifax, Novia Scotia; Thomas M. Drysdale, M.D., Philadelphia; J J. Dugdale, M.D., Montreal, Canada; L. A. Duhring, Philadelphia; R. J. Dunglison, Philadelphia; A. Dunlap, Springfield, Ohio; S. S. Earle, St. John, New Brunswick; Paul F. Eve, Nashville, Tenn.; S. Engelstodt, Copenhagen, Denmark; J. A. Estlander, M.D., Helsingfors, Finland; Cyrus Falconer, M.D., Hamilton, Ohio; Wm. Finlay, M.D., Edinburgh, Scotland; Austin Flint, Sr. and Jr., New York City; Anatole de Gaine, M.D., St. Petersburg, Russia; Henry Gibbons, M.D., San Francisco, Cal.; Wm. Goodell, Philadelphia; Thomas W. Gordon, M.D., Georgetown, Ohio; J. W. S. Gouley, New

York City; J. A. Grant, M.D., Ottawa, Canada; S. D. and S. W. Gross, Philadelphia; Charles Hamilton, M.D., Cornwallis, Novia Scotia; Frank H. Hamilton, New York; J. W. Hamilton, M.D., Columbus, Ohio; Charles J. Hare, M.D., London, England; B. F. Hart, M.D., Marietta, Ohio; Charles Heitzmann, New York; William H. Hingston, M.D., Montreal, Canada; Johann Hjort, M.D., Christiana, Norway; Edward M. Hodder, M.D., F.R.C.S., Toronto, Canada, John T. Hodgen, M.D., St. Louis, Mo.; T. K. Holmes, M.D., Chatham, Ontario, Canada; R. P. Howard, M.D., Montreal, Canada; John C. Hubbard, M.D., Ashtabula, Ohio; R. F. Hudson, M.D., Ballarat, Australia; Prof. Hueter, Greifswald, Germany; E. L. Keyes, New York City; H. Knapp, M.D., New York City; W. A. Konkol de Tasnopolsky, M.D., St. Petersburg, Russia; C. Lange, M.D., Copenhagen, Denmark; Jas. Leslie, M.D., Hamilton, Ontario, Canada; Joseph Lister, Edinburgh, Scotland; Wm. T. Lusk, M.D., New York City; John Duff MacDonald, M.D., Hamilton, Ontario; Marcas di J. Melcros, M.D., Havana, Cuba; H. Miyake, M.D., Tokio, Japan; A. B. Mott, New York City; H. J. Murphy, M.D., Chatham, Ontario, Canada; George Murray, M.D., New Glasgow, Novia Scotia; S. Nagajo, M.D., Tokio, Japan; Wm. Oldwright, Toronto, Canada; George A. Otis, M.D., Washington, D. C.; Wm. H. Pancoast, Philadelphia; E. R. Peasley, M.D., New York City; Wm. Pepper, M.D., Philadelphia; J. H. Pooley, M.D., Columbus, Ohio; S. S. Purple, New York; G. Rawson, M.D., Buenos Ayres, Argentine Republic; A. N. Read, M.D., Nowalk, Ohio; Alexander P. Reid, M.D., Nova Scotia, Canada; David Robertson, M.D., Milton, Ontario, Canada; James D. Robinson, M.D., Wooster, Ohio; J. W. Rosebrugh, M.D., Hamilton, Canada; Prof. Rudnew, St. Petersburg, Russia; John W. Russell, M.D., Mt. Vernon, Ohio; Frederick Semeleder, M.D., Vienna, Austria; Leopold Servais; M.D., Anvers, Belgium; Edward Shippen, U. S. Navy; David P. Smith, M.D., Springfield, Mass.; J. L. Smith, New

York City; Joseph R. Smith, U.S.A., Ft. Monroe, Va.; E. R. Squibb, M.D., Brooklyn, N. Y.; A. Stille, Philadelphia; James Thorburn, M.D., Toronto, Canada; J. M. Toner, M.D., Washington, D. C.; Edward H. Trenholme, M.D., Montreal, Canada; Joliffe Tutnell, Esq., F.R.C.S., Dublin, Ireland; Jas. Tyson, M.D., Philadelphia; William. H. Van Buren, M.D., New York City; J. J. Woodward, M.D., U.S.A., Washington, D. C.; N. Woolwerton, Hamilton, Ontario; Theo. W. Wormley, M.D., Columbus, Ohio; Fred. H. Wright, M.D., Toronto, Ontario, Canada; H. P. Yeomans, M.D., Mt. Forest, Ontario, Canada.

The following were elected officers of the International Medical Congress:

President, Samuel D. Gross, M.D., Philadelphia.

Vice-Presidents—Paul F. Eve, M.D., Tennessee; Joliffe Tufnell, Esq., F.R.C.S., Dublin; W. L. Atlee, M.D., Philadelphia; C. Lange, Copenhagen; T. G. Richardson, M.D., Louisiana; W. H. Hingston, M.D., Canada; James P. White, M.D., New York; H. Miyake, Japan; N. R. Smith, Maryland; Prof. Rudnew, Russia; J. M. Toner, District of Columbia; Professor Hulter, Greifswald, Germany; J. B. Johnson, Missouri; F. Semeleder, Vienna: Hunter McGuire, Virginia; J. Hjort, Norway; H. Gibbons, California; G. L. Collins, Rhode Island; R. F. Hudson, Australia; Pierre Debaiseux, Belgium; N. S. Davis, Chicago, Illinois; William Adams, London, England; L. A. Dugas, Georgia; A. R. Simpson, Edinburgh; J. K. Bartlett, Wisconsin.

Honorary Vice-Presidents—Surgeon-General Barnes, U. S. Army; Surgeon-General Beale, U. S. Navy.

Secretary—General J. Minis Hays, M.D., Philadelphia.

Secretaries of Meeting—William B. Atkinson, Richard J. Dunglison, R. A. Cleeman, M.D.; W. W. Keen, R. M. Bertolet, M.D.

Treasurer—Caspar Wister, M.D., Philadelphia.

XUM

The Congress was divided into nine sections, which were the following:

Medicine, Biology, Surgery, Dermatology and Syphilography, Obstetrics, Ophthalmology, Otology, Sanitary Science, Mental Diseases.

The chairmen of these were the following: Alfred Stille, M.D., Philadelphia; J. C. Dalton, M.D., New York; Professor Joseph Lister, Edinburgh; James C. White, Boston; Robert Barnes, London, England; R. Brudenell Carter, London; Clarence J. Blake, Boston; Stephen Smith, N. Y., John P. Gray, New York.

Committee on Publication—John Ashhurst, Jr., R. J. Dunglison, William Goodell, James H. Hutchinson, and Caspar Wister, all of Philadelphia.

Strange to say, laryngology and hydrotherapeutics were entirely ignored, and were not brought to the notice of the Congress.

The programme of public business was the following, as already alluded to above, at noon, September 4th:

Prayer. Address of welcome, by Professor Gross. Address on Medicine, by Austin Flint, M.D., New York.

Dr. J. J. Woodward, Surgeon U. S. Army, read a paper before the section of medicine, entitled Typho-malarial Fever; is it a special Type of Fever? The Doctor kindly gave me a copy of his paper, but I have had no time to peruse it yet. The well-known ability of the author, however, is sufficient to warrant me in recommending this monograph to those of your readers especially interested in this subject.

One of the most important subjects brought out for discussion was that on "*Antiseptic Surgery*," reporter, John T. Hodgen, St. Louis, Missouri. The different methods of treating wounds, and the experience of the most eminent surgeons, both here and abroad, was given, and the conclusions drawn therefrom ought to have been that Lister's method was, by far, the best and safest mode of all, whn carried out faith-

fully; but still there were some gentlemen who were not up to the times, and had not studied the germ theory, consequently can not understand the value of antiseptic treatment, and adhere to the *stage-coach* treatment instead of using steam and electricity.

Were I to enlarge upon this topic, it alone would be sufficient to fill the pages of this number of your Journal, and it may be sufficient for the present to have called the attention of your readers to the injustice done by the section to Professor Lister, who himself minutely described the why and wherefore, and still the motion prevailed that the section could not come to any definite conclusion regarding the value of the antiseptic treatment. The other sections I could not visit that day, and can therefore say nothing about the value of the work performed in them.

On Tuesday, we had an address on Hygiene and Preventive Medicine, by Henry J. Bowditch, President State Board of Health, Massachusetts. He recommends a national bureau of health, and boards of health in every city, village, and town in the United States. The suggestions were all practical, and should be indorsed by every physician in the land.

Dr. J. Lewis Smith brought up the question: Are Diphtheria and Pseudo-membranous Croup identical or distinct affections? To those who have thoroughly studied the question, its discussion was entirely superfluous. Croup is as widely different from diphtheria as scabies is from scarlatina. My views on the subject I have published in the New York Physician and Pharmacist of June and August of the present year.

I should have liked to have heard Professor Flint, Jr's., paper in the section on Biology—on the Excretory Function of the Liver, but being myself positive, from my own researches, of the correctness of the germ theory, which I published in the paper above referred to, I had to forego the pleasure of hearing Flint's no doubt excellent paper. I was

overjoyed, in the section on Surgery, where Professor Lister, of Edinburgh, preached his method of treatment—alas! to many deaf ears—to hear confirmed, by so high an authority, what I have myself found to be the facts in many so-called contagious diseases, especially "*diphtheria.*"

Wednesday the 6th. The address on surgery by Paul F. Eve, of Nashville, Tenn., was listened to with marked attention. The Doctor showed that to America is due the credit of having originated some of the most difficult operations, especially in the ligation of arteries, and ovariotomy; then the use of anæsthetics must all be credited to our progress in surgery within the last century. As a historical sketch of American surgery, the address was one of the best I have ever heard.

The Treatment of Fibroid Tumors of the Uterus, by W. L. Atlee, of Philadelphia, deserves especial mention; but it would take too much space to allude even to this valuable contribution to medical literature.

The general subject of Quarantine, with particular reference to Cholera and Yellow Fever, was the title of a paper read by Dr. J. M. Woodworth, Supervising Surgeon-General, U. S. Marine Hospital service.

Disinfection in Yellow Fever, by C. B. White, New Orleans.

The address, "The Medical Staff of the United States Army, and its Scientific Work," by J. J. Woodward, Surgeon U. S. A., was delivered at Jefferson Medical College, and elicited great applause from at least eight hundred physicians present, who were delighted to listen to the able and most creditable address of the author; and every body present was charmed with the magnificent photographs of specimens, reproduced on the screen, representing the affections of the intestinal track. From the simple catarrahal inflammation to the more severe affection of diphtheritic tubercular ulcerations were admirably shown.

XUM

The Nature, Causes, and Prevention of Puerperal Fever, by Wm. T. Lusk, of New York, wherein he conclusively showed the connection of this formidable disease with germs brought into the system from without, was received with great satisfaction, and was one of the many excellent papers read before the section over which Prof Barnes, of London, presided. Incidentally the treatment of puerperal fever was touched upon, and isolation of patients so affected. The free use of disinfectants, as well as that of giving large doses of quinine and opium were very properly considered as best calculated to combat the disease; but the main remedy seems to have been lost sight of, that is, the water treatment of puerperal fever. I published, some months ago, in the Cincinnati Clinic, a number of cases treated in the lying-in ward, in Dresden, Germany, with the happiest results. No other treatment can compare with it, and I allude to it simply for the purpose of encouraging others to use it, should they meet with a similar case.

Universal Pharmacopœa, by E. R. Squibb of Brooklyn, as well as the proposition of Dr. Seguin, of this city, to introduce throughout the civilized world a uniform syitem of measures and weights—the so called metric system—should be freely discussed in all medical county and State societies, and should be adopted, after due notice of a year or two, by the American Medical Association, in the same manner as was done by Germany and Austria, where that system now prevails.

The parting address of Dr. Davis, of Chicago—who, by the by, resembles his famous namesake, Jeff. Davis, very much—has already been alluded to, as well as the touching valedictory of Prof. Gross.

It would be impossible for me to do justice to the excellent work performed by the distinguished body of physicians, numbering at least one thousand, assembled in Philadelphia; and to mention even the titles of all the papers read

XUM

would require more space than you could possibly assign to it in your Journal. The ophthalmological and otological section, including our most eminent oculists, was, among others, adorned by the presence of your brother, Dr. T. R. Pooley, who will no doubt communicate to you all the papers of interest, and give you a full account of its proceedings. The labor of the dermatological section I will take the opportunity of reviewing in my next letter.

Yours truly,

DR. RUDOLF TAUSZKY.

Notes relative to Nocturnal Incontinence of Urine, and its Treatment. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System in the University of New York, etc.*

Perhaps no one affection of childhood is attended with more inconvenience and discomfort than nocturnal enuresis, and few are so obstinate in resisting the treatment sanctioned by routine and tradition. For several years past I have given considerable attention to the subject, and with the hope that the results obtained may be of value to the profession, I am induced to communicate them in brief through the pages of this Journal.

From several concomitant circumstances, I am led to the belief that in the *beginning*, when not the result of carelessness in not taking the child from bed in order that the bladder may be properly emptied, nocturnal incontinence of urine is often either choreic or epileptic in its origin. In a small number of cases, children do not acquire the power of retaining the urine through the night; but setting these aside, as well as those in which education has not been attempted, I am satisfied of the presence of either the choreic or epileptic condition in the great majority of the remaining cases. It is not necessary that there should be other manifestations of

* This article was received too late for insertion in the proper place.

these morbid states in order that acceptance should be accorded to this view, for it is well known that there are many forms of aborted attacks of both diseases. Nevertheless, it will often be found that there are other phenomena which serve to indicate unerringly the true state of the case. Among these may be mentioned grinding of the teeth, twitching of the muscles, rolling of the eye-balls, stupor, moaning, night terrors, etc., as well as fully developed symptoms occuring during wakefulness. But however it may originate, nocturnal incontinence of urine is very apt to become habitual even after the primary cause has disappeared, and these causes are not infrequently met with in adults in whom there appears to be during sleep an absolute insensibility to the excitation caused by repletion of the bladder. Indeed, a few cases have come under my notice in which this insensibility existed during wakefulness, there being no other abnormal phenomenon. The first intimation which the patient in such instances experiences is the contact of the warm urine with the external surface of the body, and that sensation is at once sufficient to arouse the will into the action of contracting the sphincter. There is, therefore, no absolute paralysis of the sphincter, but there is an entire loss in it of the power to be reflectively, or, more properly, especially controlled. One of these cases was that of a gentleman of social tastes whose position was rendered extremely miserable by the existence of the weakness in question. Society had closed doors for him, places of amusement were out of the question, and even business could not be conducted without the inevitable India-rubber urinal which he was obliged to wear to avoid absolute disgrace. In his early youth, this gentlemen was subject to chorea, and it was then that the incontinence of urine made its appearance. The chorea had long since disappeared, but the urinary trouble remained in spite of all means adopted for its cure.

But without further discussion of the pathology of the

XUM

affection, I pass at once to the practical points of its treatment:

From whatever cause induced, nocturnal incontinence of urine consists in an excessively irritable condition of the sphincter of the bladder. The usual relation existing between the two spinal functions, the one contracting the sphincter and the other relaxing it, is disturbed, and the latter preponderates. There is accordingly an excessive degree of excitability in the direction of relaxation, and the immediate seat of the cause is doubtless to be found in that part of the spinal cord in nervous relation with the part in question. It is to the spinal cord, therefore, that our therapeutical measures should be directed, and these should consist in the employment of those means which are known to lessen the excitability of this nerve centre.

I have found the following plan of treatment so efficacious that, though there are others which are at times followed by success, I have for several years past adopted it exclusively:

1. Supposing the patient, as is generally the case, to be a child, the bladder should be emptied on going to bed, and then two or three times afterwards the patient should be taken up and again made to urinate.

2. Sleeping on the back should be prevented. The prone position is one which, of all others, increases the amount of blood in the cord, and hence augments its irritability.

3. The following prescription should be given for several months—three or four at least—if stopped sooner the affection is liable to return: ℞. Zinci bromidi, ʒss Ergotae ext. fl., ʒiv. M. ft. sol. Dose, ten drops three times a day, increased five drops every month. Thus for the first month ten drops are taken three times a day; for the second month, fifteen drops three times a day; for the third, twenty drops, and so on. It is preferably administered after meals, being less apt then to excite nausea or vomiting. Should

either of those symptoms prove troublesome, the ensuing two or three doses may be somewhat smaller.

Children of from four to twelve years of age can take the foregoing quantities without disturbance of the general health, and even for adults it is not often necessary to increase them except in the way of augmenting the doses by five drops every two weeks instead of every month.

It will almost invariably be found that by these means the incontinence of urine is cured and the general health of the patient much improved, but occasionally a case is met with in which the bromide of zinc is not well tolerated. It proves irritating to the stomach, and induces a peculiar cathaxia, characterized by emaciation, paleness of the complexion, a dull expression of the face, dryness and roughness of the skin, obstinate constipation, etc. In such instances the bromide of iron may be substituted for the zinc compound with advantage. It should be given in the form of a syrup (ferri bromidi, ʒi., syrupus simplicis, ʒvi.), in doses beginning with five grains three times a day, gradually increased to fifteen or twenty. A teaspoonful of the syrup, made according to the above formula, contains about ten grains of the bromide of iron. The dose, therefore, to start with, is half a teaspoonful three times a day, increased gradually, till at the end of three or four months the patient is taking a teaspoonful and a half or two teaspoonfuls of the medicine. With each dose of the bromide of iron the fluid extract of ergot should be given separately, and like it should be gradually increased from ten drops three times a day to a drachm as often. The two medicines can not be kept mixed together for any length of time without the bromide of iron being decomposed and the ergot also injured.

In the nocturnal incontinence of urine occurring in adults the principles of treatment should be similar, but instead of the bromide of zinc the bromide of either potassium, sodium, or calcium should be employed, and it is not necessary to give

XUM

the remedy in augmenting doses. One ounce of either of the compounds mentioned should be dissolved in four fluid ounces of the fluid extract of ergot, and of the mixture a teaspoonful should be given thrice daily. In extreme cases blisters to the skin are valuable adjuncts, and in several recent instances I have made successful use of the actual cautery to the dorso-lumbar region. As in children, the treatment must be directed to the emptying of the bladder late at night before retiring to bed, the prone position must as scrupulously be avoided, and the remedies should be continued for several months.

It must be clearly understood that these notes do not refer to the incontinence of urine which results from paralysis of the sphincter of the bladder, so frequent a phenomenon in certain organic diseases of the spinal cord. In such cases, though ergot is, to a certain extent, useful, the main reliance is to be placed upon the preparations of belladonna.

There is also a hysterical incontinence of urine, which, though not embraced within the present category, I may say yields readily to the bromides and ergot as recommended above. If in such cases there is reason to believe that the sphincter is paralyzed (and the fact may be definitely known by the inability of the will to constrict the sphincter), a few drops of the tincture of belladonna—ten or twelve, for instance—may be administered in conjunction with the other remedies, and counter-irritation may be advantageously applied to the spine.

EDITORIAL.

Among all the meetings and celebrations called forth by this Centennial year, none has been so interesting to us, as medical men, as the International Medical Congress, held during the first week of September, in Philadelphia; and no where, not even in the great exposition itself, has there been presented better evidence of our rapid progress during the first century of independent national existence. No where can there be found a record of which we have better reason to be proud.

The Congress was a great success, an occasion never to be forgotten by any who participated in it. In its gathering of medical men from various and distant fields of labor, in its opportunities for seeing those whose names are associated with the very life of contemporaneous medical science, in its social reunions, and in the actual work presented, it was delightful and all that could have been expected. One special feature, most interesting to us as Americans, was the Centennial Addresses on the various branches of medicine, gathering up the work of the century, preserving it for future reference as a precious memorial of the past, and saving much labor to future students. All the subjects were well presented, and one feels little like making distinctions or comparisons; but we can not refrain from saying that among the very best of these addresses was that on the progress of chemistry and toxicology, by our fellow-townsman and colleague, Prof. T. G. Wormley, of Starling Medical College.

When we consider what was the condition of these Colonies when they, by a solemn declaration of independence, severed the tie that bound them to the mother country, and started alone and almost unaided as a nation, we must confess to both wonder and pride at the progress made in every department of medical science. Without institutions for medical instruction, with but few practitioners, utterly destitute of a medical literature, we have, in the short space of a century, created on this western hemisphere monuments of medical science and skill that any people might be proud of, and probably added as much to the practical resources of the art as any other part of the world during the same time.

There were not as many foreign delegates at the Congress as we had hoped and expected to see, but there was a goodly number, and most of them men truly representative in their several departments.

XUM

The names of Barnes, Adams, Carter, Lister, and Tuffneil are sufficient evidence that though Great Britain might have sent more, she could not have sent better men; and if these gentlemen were gently bored by the Centennial and strictly American feature of the occasion, they were far too kindly and polite to show the least sign of it. And we think we may venture the belief that they will place a higher estimate than before on American medicine and surgery.

One effect that we doubt not was produced in the minds of many from distant and isolated fields of practice was pleasure and surprise at finding many of those things they had found out for themselves, and hardly knew the worth of, recognized and valued by the leaders of the profession. And even if it gives rise to a little fluttering of vanity, it does a man no harm to find that his voice and opinion are received with respect and attention in such a body. He goes back to his work not without consciousness enough of shortcomings, but with confidence and new heart.

The proceedings are sketched on another page by our New York correspondent, and while we commend his letter as interesting, we wish distinctly to disavow any indorsement of the opinions to which he so frankly commits himself. Good work was done in all the sections, of which, however, it seems to us there was at least one too many—that of otology. Why this was not made, as it practically is, an appendage of ophthalmology, we are at a loss to understand. Is it that our ear surgeons—or otologists, as they are now called—are getting proud?

We stepped into the ophthalmic section one afternoon, and heard a distinguished ophthalmologist describing the best way for the general practitioner to treat certain eye diseases—not the best way to treat them, but the best way for the general practitioner to do it. Is not this a little too much? Has not the general practitioner any rights which a specialist is bound to respect? May we not meekly and humbly beg of our distinguished friends when they give us instruction on any subject to give us the best they have, and not treat us as though our mission in life was simply to mistreat or half-treat our cases, and so provide material for specialists?

We understand that the dermatologists had a pretty lively time, debating whether certain skin diseases were of local or constitutional origin, Dr. L. D. Bulkley, of New York, standing almost alone on one side. He battled bravely, however, true to the ancient proverb, which may be freely rendered, "Skin for skin; yea, all that a dermatologist hath will he give for his theory." Nothing but rumors, faint and indistinct, reached us of what was going on in the other halls, and we spent all our

own time in the surgical section. Here much was to be heard, and he must have been a very wise man indeed who did not learn something. Perhaps the great event here was the privilege of listening to Prof. Lister for three hours, on his favorite subject of antiseptic surgery. He convinced his audience of one thing, that whether they believed all he had to say on the subject or not, he himself believed it most thoroughly and devoutly. For our part, we do not feel able to decide the question, but think that much good has already been done, and more will be done, by calling attention anew to the treatment of wounds, and the necessity of cleanliness and attention to details.

Dr. Van Buren gave us a very good résumé of the present state of knowledge on aneurism, particularly as to its treatment. In the course of his remarks he suggested the control of hæmorrhage from branches of the iliac by pressure exercised on these arteries by the hand in the rectum. This possible use of the rectum had, however, been already suggested in the American Journal of the Medical Sciences for January, 1873, by Dr. Woodbury, then house surgeon in the Pennsylvania Hospital. After Dr. Van Buren's paper we were treated to some admirable remarks on the medical and postural treatment of aneurism by Mr. Tuffnel, of Dublin.

The field day for debate in this section, however, was when Dr. Sayre's paper on hip-joint disease was discussed. The Doctor's statement that this affection was generally independent of the so-called scrofulous condition, and due to traumatic causes, awoke an amount of opposition which was surprising to us. Able men were arrayed on either side, but we thought that the weight of argument was on Dr. Sayre's side.

The courtesy, attention, and good management of our Philadelphia brethren were beyond all feeble praise of ours, and deserve the thanks of the whole profession.

XUM

REVIEWS.

Archives of Clinical Surgery. A Monthly Periodical Devoted to Surgery in all its Special Departments. Edited by EDWARD J. BERMINGHAM, M.D. New York: Routledge & Co., 102 West Forty-ninth street. Vol. I. Nos. 1, 2, and 3.

Several of the more important specialties are represented, and ably, too, in our American periodical literature. We have the Archives of Ophthalmology, the American Journal of Obstetrics, several journals devoted to mental and nervous diseases, one to dermatology, and so on, and now we are delighted to see one devoted to surgery. When we first recieved the prospectus of this new journal, we were ready to exclaim, What! another medical journal? What can be the need or use of that? But now we are inclined to think that the first exclamation of impatience was unwise and wrong, and are glad that we have waited until these three numbers have made their appearance before expressing any opinion on the subject.

Now we can deliberately say that the talented and able editor has already fully justified his somewhat daring enterprise, and broken ground successfully in this new department of journalistic effort. If he keeps on as he has begun, it will soon become *the* journal that no surgeon can afford to be without.

It is very handsomely printed on excellent paper, and that no trouble or expense is to be spared in its make up is shown by the number of illustrations that have already adorned its pages. The names of those contributors who have already furnished articles are well known wherever surgery or science is cultivated; and the long list of prominent men engaged as writers for its pages, as given on the second page of the cover, is a guarantee that this high character is to be fully maintained.

The September number contains an article on the Transmission of Syphilis, by Dr. R. W. Taylor, of New York, whose recent labors in the department of syphilology have proved him to be an excellent and painstaking investigator, and earned for him a respectful and ready hearing for any thing he may have to say. Next comes a case of Aneurism of the Aorta, resembling Aneurism of the Innominata, by Dr. S. Fleet Spier, of Brooklyn, New York, which will be read with interest, both on account of the anomalous features of the case itself, and the illustration it affords of the excellence of that gentleman's artery constrictor, an instrument which we believe is destined to grow in favor with practical surgeons.

Article three is Constriction of the Brachial Artery, following "Wound of the Palmar Arch, by Dr. N. S. Robbins, of Brooklyn," and the last article is entitled Ligation of both Femoral Arteries, for Femoral Aneurism on one side and Popliteal Aneurism on the other, by Erskine Mason, M.D., of New York.

It is a little singular that we should thus have three articles in one number on the surgery of the arteries, and we must say that we have seldom read three of a more instructive character. In the hospital records which follow we have also two cases of ligation of important arteries. These hospital records do not strike us as the best feature of the journal. They are too short and fragmentary, it seems to us, to be of much use or profit. We have given this rather unusual space to our new "exchange" because it is rather a startling and precarious venture, and because its excellence deserves congratulation and recognition. We wish it every success, and hope the surgeons of our whole country will make it the medium of communicating their experiences and observations.

Transactions of the Medical Association of the State of Missouri, at its Tenth Annual Session. St. Louis, April, 1876.

This handsome pamphlet of seventy-nine pages, though good as far as it goes, is rather a meagre result of a year's work in the great State of Missouri, and were we disposed to attach any value to this kind of literature we should be ready to deplore the fact. But we really think that the annual reports of the various State societies, with their limited local circulation, are only so many sepulchers for papers and ideas, and as much a detriment as an advantage to the cause of medical progress.

In the transactions before us, after the usual report of the Society's proceedings, we have, first, a paper by Dr. John T. Hodgen, of St. Louis, on "Nerve Section for Neuralgia;" second, "Reflex Induration of the Penis." This is a capital practical paper, and ought to have appeared in some good journal. The next article, on "Blepharospasm," by Dr. Wm. Dickinson, of St. Louis, is interesting; especially so is the case which is related, in which this annoying form of spasm seemed to depend on some central lesion of the nervous system, and resisted all methods of treatment, including canthoplasty and division of the supra-orbital nerve. The patient died of what appeared to be a general paralysis.

This is followed by an article on Torticollis, by Dr. A. J. Steele, of St. Louis, which advocates sound principles in the treatment of this troublesome affection, and describes and figuers a form of elastic extension well adapted for the purpose in view. Next we have two reports on the Progress of Surgery, by Dr. E. H. Gregory, of St. Louis, and Dr. J. W. Trader,

XUM

of Sedalia, the latter on the use of warm water in severe injuries, which is a good practical paper.

The original articles are concluded by a report of a case of Exsection of the Knee, by Dr. A. P. Lankford, of St. Louis, which was remarkably successful, and is a valuable contribution to the statistics of an operation that is still, to a certain extent, on trial, but which many surgeons think has not yet had full justice done it, particularly in this country.

On the whole, this little volume of transactions is of a higher character than many similar productions which we receive, and the State of Missouri is to be congratulated on the ability of its medical men, especially its surgeons. It is noticeable that most of the articles emanate from St. Louis, which does not speak so well for the country practitioners of the State. We believe, however, that this is not so much from any lack of ability as from a diffidence in trusting themselves to print, which seems to be characteristic of physicians removed from our great cities, and which, no doubt, deprives us of much that is valuable.

Transactions of the Medical Society of the District of Columbia. Vol. III., No. 2.
Proceedings of the Medical Society of the County of Kings, Brooklyn, New York. Vol. I., No. 7.

These two pamphlets assure us that there are at least two local medical societies where good work is done, and the members are active and enlightened promoters of medical science. But their very excellence makes us regret their existence, for we can not see any reason why so much good material should be withheld from some medical journal where it would have an extended circulation and do good, and be buried in these pamphlets which, at best, reach a very limited number of readers. It does seem to us that such unnecessary multiplying of separate publications, while the regular journals are but poorly patronized, is a grave mistake.

In the transactions of the Medical Society of the District of Columbia there is a report of a case of extraordinary bony formation in the dura mater. The patient, an Englishman, aged 62, died from intracranial hæmorrhage, the result of severe blows upon the head, and the osseous degeneration of the dura mater was discovered at the autopsy, and is described by the reporter, Dr. J. F. Thompson, as follows: "The deposit was between the dura mater and the arachnoid; and there were large plates corresponding with the two parietal bones, the halves of the frontal, and the occipital. The parietal plates were upon either side of the sagittal suture, and were four inches in length, and two wide, posteriorly. The occipital plates were smaller, but the frontal were quite large, the left

measuring two and one-half inches in diameter. There were also smaller plates laterally for the squamous portion of the temporal. These plates were all thick, but there was no diploic substance; this was also very deficient in the skull. There was considerable deposit, also, in the falx cerebri. It was wanting immediately beneath the sutures." The author remarks further: "The ossification in this case was greater than I have ever seen, and I doubt if there is another such upon record." We are not aware of any recorded case that will equal this in extent.

The proceedings of the Medical Society of Kings contains a number of very interesting articles, but the one which mainly attracted our attention is the last, on The Pollen of the Rag Weed (Ambrosia Artemisiæ folia), as the Cause of the Hay Fever. Whether the cause of hay fever, in general, has been found, can not yet be judged, but it seems nearly certain that its cause in at least one case, perhaps in many others, has been discovered in the pollen of this very common plant. It is a subject of great interest, and we hope that further and extended observations will soon be made and recorded. P.

A Manual of Percussion and Auscultation of the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By AUSTIN FLINT, M.D., etc., etc. Philadelphia: Henry C. Lea. 1876.

The first chapter of this work is given to the consideration of the definition of physical diagnosis, its significance and value; the anatomy and physiology of the chest; the importance of thorough knowledge of these in order that one may be able to comprehend and appreciate the deviations from the normal condition which are observed in disease; the physical conditions incident to the different diseases of the respiratory organs, their importance, and their original significance; followed by a summary, given in order to impress the several morbid conditions on the mind of the student.

We are next taught the distinctive characters of healthy and morbid sounds, in which much stress is laid upon the intensity, pitch, duration, and quality of the sounds elicited by examination.

The method of determining diseased states by the study of the distinctive characters of sounds is named the analytical method, in contradistinction to the method of deducing the physical conditions incident to the diseases from the sounds alone.

Some remarks on the significance of the signs, as regards the physical conditions which they severally represent, followed by the regional division of the chest, closes this chapter.

Chapter second treats of percussion in health; chapter third, of percussion in disease; chapter fourth, of auscultation in health; chapter fifth,

XUM

of auscultation in disease; chapter sixth is given to the consideration of the physical diagnosis of the diseases of the respiratory system; chapter seventh, to the physical conditions of the heart, in health and disease; chapter eighth, the physical diagnosis of diseases of the heart; and chapter ninth, the diagnosis of thoracic aneurism.

Like all the works of its distinguished author, this manual is characterized by the absence of useless verbiage, by clearness, and practical sense.

The author is disposed to be a little satirical when he advises, in the first chapter, that practitioners must recollect that in order to understand the full value of physical signs they must have a knowledge of the anatomy and physiology of the organs of the chest. He claims priority in the use of the pitch, quality, etc., of sound as a more perfect mode of ascertaining the full meaning of signs, and quotes a paper read by him before the American Medical Association, in 1854, in proof of his claim. We supposed this matter to be understood from the time of Lænnea until the publication of Professor Loomis's book, in which we saw, for the first time, stress laid upon the several properties of sound, and the method set forth as superior, and as a novelty.

No matter to whom the honor of the discovery may be due, the idea is good, and can not fail to be useful to, and to attract the attention of, the profession.

Dr. Flint's regional division of the chest is, we think, preferable to the divisions made by some other writers, because less complex. It does not differ materially from that of Bennet, published twenty-five years ago.

It is a matter of regret that the author confined himself to such narrow limits. It would have been easy for him to have given to the profession a complete work on the subject of physical diagnosis as a complement to his admirable book on practice.

The book is well printed and handsomely bound. L.

Atlas of Skin Diseases. By LOUIS A. DUHRING, M.D. Part I. Philadelphia: J. B. Lippincott & Co. 1876.

It is only a few days ago that we heard a physician of far more than ordinary intelligence and ability declare that he knew nothing about skin diseases; and what he confessed with regard to himself there is great reason to believe is equally, if not much more, true of multitudes of others, indeed of the great mass of physicians.

These affections are generally looked upon in a crude, uncertain way as some sort of eruption or breaking out in the skin, it makes no difference

what, and prescribed for quite empirically. The physician may know that this large class of diseases has been studied and classified, and that they have had a variety of names given to them, but seems to think that any thing like an accurate discrimination of them is a matter of great difficulty, not to be expected of the general practitioner. But lurking at the bottom of this ignorance and indifference, there is no doubt a belief that it does not matter much to be particular about them, that nothing practical is to be gained by it.

As long as this condition of things exists, there is no need of any excuse or apology for the multiplication of books on the subject. And, furthermore, we quite agree with Dr. Duhring that mere text-books and descriptions will not suffice, but that for those who can not have the advantage of actual clinical demonstrations good plates are indispensable. Indeed, there is no branch of medical literature where they are so absolutely necessary as here. Inasmuch, therefore, as there has been no previous attempt of this kind in this country, except some photographs published in Boston—and these lacked the essential element of color—Dr. Duhring deserves our thanks for having made the attempt, and we hope most sincerely his work will meet with ample encouragement.

His work, moreover, deserves our praise for the intrinsic excellence displayed in this first specimen of it, which his well known ability and the character of his publishers assure us will be maintained throughout, and then we shall have an atlas of skin diseases, national in character, of which we may justly be proud.

This first part contains four large quarto-sized colored plates of the following diseases, viz.: Eczema Erythematosum, Psoriasis, Lupus Erythematosus, and Syphiloderma Pustulosum. Of these, while they are all excellent, we think the two last are the best.

The portrait of Eczema, while it displays admirably the general characteristics of the disease, does not bring out the details with sufficient plainness; the plate of Psoriasis, it seems to us, makes the patches appear too raised and prominent. The last two, especially the one of pustular Syphiloderma, are every way excellent, the latter being as good a representation as any we know of. We can not too strongly recommend every physician to procure this work, which is to be completed in ten or twelve parts, and familiarize himself with these graphic representations of skin diseases.

The accompanying text is worthy of the reputation already acquired by the author, and more than this need not be said to commend it to all.

The price of each part is $2.50, which will be money well spent.—P.

XUM

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F.R.C.P., etc. Philadelphia: Henry C. Lea. 1876.

Most works on obstetrics, even those of modern date, are of so nearly stereotyped a character that we have no difficulty in recommending one to a student. One is as good as another, is the common answer to the inquiry concerning their merits.

From the time of Ramsbotham and Cazeaux until within recent periods very little advance was made in this department of the science of medicine. True, we had some innovators, as Simpson, but they confined themselves mainly to the consideration of a few things, one or two operations, the treatment of placenta previa, etc., but made no effort to change the old rules with regard to labor and its management.

Two books have recently appeared in which there are decided departures from the traditionary paths. These are the works of Lieshman and Playfair, and perhaps we may include Schroeder's excellent book, but the last named has decidedly the flavor of orthodoxy.

Dr. Playfair begins his preface by stating that "in no department has there been more progress in late years than in midwifery, and none in which modern views of practice differ more widely from those of only a short time ago. His object has been to place in the hands of his readers an epitome of the science and practice of midwifery which embodies all the recent advances. He is aware that on certain points he has recommended practice which not long ago would have been considered heterodox in the extreme, and which even now will not meet with general approval."

He proceeds to give after the usual plan the anatomy of the pelvis and generative organs as minutely as it is laid down in any of the textbooks of descriptive anatomy; in connection with which he describes "the movements of the pelvic joints," which he asserts are so considerable, even in the male, as to be observable in certain postures and during certain acts, and in the female more decided during labor, and are facilitated by "the changes which are known to take place in the pelvic articulations during pregnancy." Notwithstanding what is further stated, that "the ligaments and cartilages become swollen and softened, and the synovial membranes existing between the articulating become greatly augmented in size and distended with fluid, these changes act by forcing the bones apart, as the swelling of a sponge placed between them might do after it had imbibed moisture," we feel a little doubt in accepting the belief that these movements have much to do in facilitating labor. The movements of these joints are so slight, at least in the great majority of women, as to be of little importance in that process. It is difficult in the

majority of cases to detect any movement whatever; and we feel inclined to question the author's assertion concerning the changes which occur in the joints of the pelvis. It would be a great comfort to be able to agree with him on this point, for we should be relieved of a great deal of uneasiness concerning cases in which there is diminution of the normal dimensions of the pelvis. A slight degree of expansion of these joints in many such cases would be sufficient to prevent dystocia. Does it ever occur? We have felt the coccyx move back and forth during labor-pains, but may be permitted to doubt if the other joints move to a perceptible extent.

Ovulation and menstruation are well described, and there are some statistics on the influence of climate, race, and other circumstances on the establishment of menstruation, which are of great interest.

There are some very sensible remarks on the cessation of menstruation at the close of this chapter.

Part II., on Pregnancy, begins with a chapter on conception and generation, in which there are the usual ambiguous explanations of the mode by which the semen is brought into contact with the ovum.

The remainder of the chapter is interesting, and quite even with the times, but one could wish some things in it were a little more conclusive; as, for example, the explanation of the formation of the decidua vera, which, notwithstanding the opinion of Coste, which is quoted somewhat at length, is not what we may hope to have in a future edition.

In the chapter on the Anatomy and Physiology of the Fœtus the author, after quoting Sir James Simpson's well-known paper concerning the size of the fœtal head, says, "It is probable that race and other conditions, such as civilization and intellectual culture, have considerable influence on the size of the fœtal skull," but that the data upon which this opinion is founded are not sufficiently positive. We think the fact, which is pretty well established, that highly nurtured and intellectually cultivated people have improved in physical, as well as mental, development, ought to relieve us of all uneasiness on this score, for if the head of the fœtus is increased, so also the dimensions of the pelvis seem to be increased. It is a fact which can not be questioned, that the largest number of cases of dystocia from disproportion between the head of the child and the pelvis of the mother met with in this country are among the classes in whom there is the least intellectual culture.

At page 125 attention is called to the remarkable changes which occur in the blood during pregnancy, and due importance attached thereto. A careful study of these and a recollection of what is obtained will materially influence the management of cases in which untoward symptoms appear.

XUM

The importance of the signs of pregnancy, and the fallacies connected therewith, are considered at length. The reader is duly warned of the risks to the patient and the physician in the expression of hastily formed opinions by the latter, in cases in which the signs are the least degree ambiguous.

After mention of the attempts which have been made by different writers, including Montgomery, to classify the signs of pregnancy, the author says: "The simplest way of studying the subject, however, is the one which is now commonly adopted, of considering the signs of pregnancy in the order in which they occur, and attaching to each an estimate of its diagnostic value."

At page 137 it is stated the pulsations of the heart in male children during intra-uterine life are 124 per minute, as against 144 per minute of the female; and so uniformly is this the case, that the difference in the frequency of the pulsations has been used by Steinbach and others as a mode of determining the sex of the child before birth.

This is decidedly one of the late advances in the science of obstetrics, and when taken in connection with the mode of ascertaining the position of the child in utero by palpation, it would seem that there is not much more to be known concerning the fœtus, except the precise mode in which the ovum becomes fertilized.

The differential diagnosis of pregnancy is carefully ela' orated and its importance pointed out. With regard to the vexed question of protracted gestation, after quoting the laws of France, Prussia, England, and those of some of the United States, and the remarkable cases of Simpson and others, the author concludes by saying: "On the whole, it would be hardly safe to conclude that pregnancy can go more than three or four weeks beyond the average time. This conclusion is justified by the cases we possess in which pregnancy followed a single coitus, the longest of which was 295 days." Which leaves this question just where it was before, to vex and worry the practitioner and the woman. L.

A Manual of Midwifery. By ALFRED MEADOWS, M.D., F.R.C.P., etc. Second American from the third London edition. Revised and enlarged, with one hundred and forty-five illustrations. Philadelphia: Lindsay & Blakiston. 1876.

Whatever may have been the literary activity recently displayed in the other departments of medical science, no one can complain that the obstetricians have not fairly kept pace with it, both in the number and excellence of the works they have given to the profession.

Within a comparatively short time we have had two editions of Liesh-

man's masterly treatise, a translation of Schrœder's wonderfully condensed manual, a true *multum in parvo*. Playfair's System of Midwifery, Robert's Students' Guide to the Practice of Midwifery, and last, though not least, a second American edition of Meadows's excellent manual. We mean no disrespect to the other works enumerated, all of which possess points of excellence, some of them of very great excellence, when we deliberately say that we think the one which is the subject of this notice is the best of them all for the use of medical students. The specialist, and the obstetrical expert, will hardly find that discussion of various subjects, that amplification of his favorite branch, which he needs and delights in, but we venture to say he will find little or nothing to dissent from, and much to win his hearty approbation. In our day obstetrics, together with all the other branches of medical science, has grown to such proportions in the hands of its multitude of zealous cultivators that no one book of moderate size can present it as a whole, except in outline, within moderate limits. To give such an outline, which shall leave out nothing of importance, which shall give each part its due proportion, which shall lay sound and solid foundations for future study, and awaken a desire for future investigation and fuller research, is no mean task. It is one which requires excellence of an uncommon order, real love for and thorough knowledge of the subject, and yet a literary self-control that can subordinate every thing else to the accomplishment of a well-defined object.

This difficult task Dr. Meadows has accomplished to admiration. His book must necessarily grow in favor with students and teachers, and we think it will be long before it will be displaced for the specific purpose which it aims to fulfill. Its modest, well-written preface, copious and helpful index and table of contents, well-selected and really illustrative wood-cuts, all show in advance the hand of a workman "who needeth not to be ashamed." Part I., on the Anatomy and Physiology of the Organs of *Gestation* (though why the old time term organs of *generation* is thus changed we fail to understand), is excellent and well-written throughout. It is divided into four chapters: First, the Pelvis; second, Female Organs of Generation; third, Conception and Gestation; fourth, Development of the Gravid Uterus.

We do not know any where a better summary of the present state of knowledge on all these subjects. It is a model of condensation; scarcely a superfluous word is used, and yet it is entirely free from obscurity or ambiguity. It is material for the student to *learn*, not simply to read, and only when he has learned and mastered it is he fitted to read obstetrics with profit.

XUM

Discussion of mooted or recently settled points is properly omitted; the results of investigation, where results have been reached, are simply and tersely stated. For example, in dealing with the measurement of the pelvis, there is no parade of numerous authorities, but the broad, general averages are given, which are exact enough for all practical purposes, and probably as exact as they ever will be. Similarly the mistaken notion of the curve of Carus is simply stated and corrected, without puzzling the student with a long argument whose pros and cons would only perplex and confuse him. In the description of the corpus luteum and the development of the ovum, we are pleased to see such free use made of the figures and descriptions of our distinguished countryman, Prof. J. C. Dalton, who has done so much to elucidate these subjects, more than any body else, we believe—and we speak from personal experience and grateful recollection—to make them understood by the medical student. To meet with some of these drawings, once so familiar to us on the blackboard in the well-remembered lecture-room, in the pages of an English work on midwifery, gave us a thrill of genuine pleasure.

Part II., Pregnancy, is divided into nine chapters, as follows: 1st. Signs and Symptoms of Pregnancy. 2d. Duration of Pregnancy. 3d. Signs of the Death of the Fœtus in Utero. 4th. Mole Pregnancy. 5th. Spurious Pregnancy. 6th. Extra-Uterine Gestation. 7th. Superfœtation. 8th. Displacements of the Gravid Uterus. 9th. Premature Expulsion of the Embryo.

The chapter on the signs and symptoms of pregnancy opens with the following sensible remarks:

"It may perhaps be said, without exaggeration, that there is hardly a branch of obstetric medicine which at times presents greater difficulties or is attended with more important consequences than the diagnosis of pregnancy. Its non-recognition may not only lead to results disastrous alike to mother and child, but a medical man may by his neglect become the unconscious instrument of a crime from which his moral nature shrinks with horror. On the other hand, in the case of the unmarried, he may, if mistaken in his diagnosis, cast a slur upon a spotless character, and by his dictum destroy a reputation upon which the maintenance of life depends.

"Little need be said, then, to prove how necessary it is to have a correct appreciation of the various signs of pregnancy; and hence the eagerness with which men have from time to time endeavored to discover some new and more unfailing sign of this condition. It must be admitted, however, that of late years no great advance has been made in this direction; and though many suggestions, of doubtful value in themselves,

have been offered, we still in the main have to trust to a few signs, the value of which has been confirmed by years of experience. There have been various ways of considering this subject by variously arranging the symptoms under certain classes; but without stopping to discuss their advantages or otherwise, it seems to me that the most natural and convenient method will be to state briefly *what phenomena may be looked for with each succeeding month*, instead of considering each separate symptom as it occurs and is modified during the whole course of pregnancy.

"This arrangement will, I think, be of no small convenience to the student, and at the same time it will be easy of reference for the practitioner. As may be readily imagined, it is in the *early weeks* of pregnancy that the greatest difficulty of forming a correct opinion presents itself. In some cases there is absolutely nothing to excite suspicion of such a condition, and the patient may only become aware of it when pregnancy has far advanced. This is especially apt to occur during lactation, and I have known abortion happen many times under these circumstances, caused probably by the sympathetic relations between the breast and the uterus. In other instances, no sooner has conception taken place than, sometimes even within a few hours, symptoms begin which at once attract attention, and force upon the patient's mind a conviction of her situation. Between these two extremes there is every shade of variety, from the smallest, almost imperceptible change, to a general disturbance of almost every function."

This whole chapter is admirable for its clearness and simplicity, and while it certainly contributes nothing to relieve the subject of its inherent difficulties, it places it in a very clear and practical light.

Referring to the well-known researches of Dr. Isaac E. Taylor, of New York, on the shortening of the cervix uteri during pregnancy, the following sentence strikes one as irresistibly comical: "Dr. Taylor, Professor of Obstetrics in America, denies that the cervix ever shortens or becomes obliterated during pregnancy." This is delightful; and the designation "Professor of Obstetrics in America" effectually prevents any possibility of mistake as to the person meant.

There is one sign of pregnancy we were disappointed in not seeing any detailed reference to, as it may, if it proves trustworthy, be of great utility in difficult and doubtful cases. We refer to the rise in the uterine temperature, as measured by the thermometer, said by some to take place.

Among the symptoms, or secondary indications, of pregnancy, there is one that occurs occasionally which our author does not refer to, and which we have never seen alluded to any where, although we have known of its occurrence—that is, an increase of the amorous propensity during this condition.

XUM

The chapter on the duration of pregnancy is short, and as unsatisfactory as all such chapters are, and, probably, always will be. That the duration of pregnancy may be prolonged very considerably, no one, we presume, now-a-days doubts; but as to the causes of such prolongation of a process ordinarily so regular, no body has made us any the wiser. And yet it is a subject we should all of us like to know all about, for it often assumes great medico-legal importance. In this chapter our author touches upon that other vexed question, as to the cause of labor, and leaves it just where he found it, notwithstanding the numerous explanations that have been given. The old one that attributes it to the will of God is as good as any. This chapter ends with a table, or ready reckoner, for determining the probable date of confinement in any given case, which will be found very useful.

Chapter third is on the signs of the death of the fœtus in utero. It presents the subject very fairly, and gives good, reliable signs of this occurrence, without perplexing the reader with exceptions, which, after all, are rare, and could never be made any easier to determine by any amount of description. The next chapter, on mole pregnancy, is taken up mainly with the consideration of the so-called hydatiform degeneration of the chorion. The rule laid down that, where the state of the patient does not demand interference, the course of events should be left to nature's determination, but where a continuous hæmhorrhage or other conditions threatens the patient's life, the uterus should be emptied at all hazards, seems to us a sound one. The cases where with the hydatid mole there exists a living twin fœtus whose existence might be compromised must be comparatively rare; and even if it were so, and we knew it, the safety of the mother is surely the main point, and the true guide for practice.

Chapter fifth, on spurious pregnancy, is a very short one, and yet long enough for the consideration of this curious subject in such a work as the one before us. To be fairly warned, and for really doubtful cases, armed with chloroform is all that is needed in these cases. A superficial examiner may be misled, but a thorough and careful one very seldom, if ever. That there is no end to the vagaries of women on such subjects, we have seen a striking illustration within a year. A woman presented herself who firmly believed that she was the subject of an extra uterine pregnancy. She had been told so by one physician, and she was certain she felt the movements of the child. She had had some localized peritonitis, from which adhesions had resulted, and no doubt the localized movements of intestinal flatus gave rise to the fallacious sensations. But explanation and argument were thrown away upon her—she persisted in her

strange delusion, for which there was not one iota of substantial reason. Probably time has ere this dissipated her error.

Women who present the ordinary phenomena of spurious pregnancy are quite often those who strongly desire to have a child, but why a woman should want to have extra uterine pregnancy is more than we can tell.

Chapter sixth takes up the subject of extra uterine gestation, which is divided into four varieties—Ovarian, Tubarian (why is this any better than Tubal?), Interstitial, and Ventral.

Of course the chapter does not pretend to any thing like a full presentation of this subject, which would obviously be out of place in a work like the present. But short as it necessarily is, we were rather disappointed to find no allusion to Dr. Parry's recent work on the subject, or to Dr. Thomas's important and interesting operation through the vaginal roof in such a case, an operation, like some others by that celebrated obstetrician, as ingenious in conception and bold in execution as it is instructive and progressive in its bearing upon future teaching and practice. In chapter seventh the perplexing subject of superfœtation is probably as satisfactorily treated as it is any where or can be in the present state of our knowledge.

Chapter eighth, on displacements of the gravid uterus, and chapter ninth, on premature expulsion of the embryo, conclude the second part of the work, and are both excellent. They have evidently been written with that full knowledge of the subject which comes from a combination of thorough study and large opportunities for personal experience and observation.

Part III., Natural Parturition, includes three chapters, on Classification of Labors and Mechanism of Parturition, Phenomena of Natural Labor, and Management of Natural Labor. In it we find nothing to call for remark, and heartily commend it as an admirable guide, both as to what not to do, as to what is to be done. And those who have had much to do with students and young doctors will readily concede that this is saying a good deal.

Part IV., on Obstetric Operation, has eight chapters, the subjects of which are divided as follows: 1. The Vectis. 2. The Forceps. 3. Induction of Premature Labor. 4. Turning. 5. The Cæsarian Section. 6. The Sigaultean Operation. 7. Craniotomy. 8. Cephalotripsy. It seems a little remarkable that so full a consideration of obstetric operations as to include the Sigaultean operation should make no mention of gastro-elytrotomy, advocated in certain cases by Thomas, and recently successfully performed by Dr. Skene, of Brooklyn. It is an old proposition revived, and just at present no one can foretell its future, but it certainly presents

XUM

such claims as to demand the thoughtful consideration of the obstetricians of the day, and is quite as worthy of a place in a manual of obstetrics as the exploded procedure of Sigault.

Part V., Unnatural Labor, is divided into three chapters—Unnatural Labor from Abnormal Condition of the Expelling Power, Unnatural Labor from Abnormal Conditions of the Passages, Unnatural Labor from Abnormal Conditions of the Child. Under this last head are included malpresentation as well as monstrosities, plural births, etc. Under Unnatural Labor from Abnormal Condition of the Expelling Power we have a description and figures of a somewhat complicated set of harness, invented by Dr. Protheroe Smith, intended to aid the expulsive powers when misdirected or otherwise faulty. Our author says he has not tested the usefulness of this contrivance, but seems to be strongly impressed with its adaptedness for the end in view. For our own part, we are prejudiced judges in such a case, having formed an opinion in advance against all such appliances, and are therefore unfit to give an opinion.

Part VI., Complex Labor, treats in separate chapters of Retention of the Placenta, Hæmorrhage, Puerperal Convulsions, Rupture of the Uterus, and Inversion of the Uterus. These are all very good, but we must say that it detracts, in our estimation, from the value of the last, that it contains no mention of Thomas, of New York, or James P. White, of Buffalo, whose names are inseparably connected with this subject.

The work concludes with Part VII., On Puerperal Diseases, of which only three are mentioned—Phlegmasia Dolens, Puerperal Mania, and Puerperal Fever—rather a meagre array even for a manual.

We conclude as we began, with hearty commendation of the book before us. If we have taken the liberty of pointing out what seemed to us its few deficiencies and shortcomings, it has been in no spirit of mere fault-finding, but only because it is so good that its special excellences were too numerous for mention, while its few faults are so easy of remedy that, while they do not impair its general excellence, it is a pity they should remain. Then, again, we are all sharp enough to detect flaws in the most perfect work, and like well enough to mention them as evidence of our superior wisdom. But we frankly confess, much as we should like to have done it, we could not have written a book any thing like so good as this. The good paper and clear print of the American edition make it a pleasure to read it, and do great credit to the enterprising and well-known publishers whose imprint it bears. P.

XUM

The Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M.D., etc. Second American, from the last London Edition, Revised and Enlarged. Philadelphia: Lindsay & Blakiston. 1876.

The appearance of a second edition of this text-book shows the appreciation in which it is held, and renders it unnecessary for us to comment upon it at any length. It has become one of the acknowledged standards of authority for the student; and its author, aware of this fact, seems determined that it shall be kept in accord with the advancing knowledge of the day, and deserve the honorable position accorded to it. It occupies very much the place among British works on Practice that Flint's book does in this country. Not a meager compendium without vitality or originality, nor yet a cumbrous and exhausting as well as exhaustive production, to be lauded, talked about, and not read, but a good, sufficiently full, readable book, to be carefully studied and referred to with pleasure as well as profit.

Its arrangement of topics is simple and satisfactory, and, for all we can see, as free from objection as any other. All diseases are divided into three classes—General Diseases, Constitutional Diseases, and Local Diseases. Perhaps no two physicians would arrange the immense variety of diseases under these three heads exactly as the author has done. But until we can agree among ourselves on this point we need not criticise another very severely.

It would be well not only if students, but medical teachers also, would heed Dr. Roberts's opening words and govern themselves accordingly: "In order to acquire a satisfactory knowledge of the science and art of medicine, it is essential that the mind should have been previously cultivated and trained, and at the same time stored with the requisite information by a careful study of the fundamental and more scientific subjects which form the earlier part of the medical curriculum." We most earnestly wish that this desideratum, which includes both preliminary education and a graded medical course, could be enforced on every one before they were allowed to assume the responsibilities of medical practice.

The work of Dr. Roberts is an excellent one, and unless we allow our patriotism to warp us in favor of Flint's, we do not know where a better text-book for the student is to be found. P.

XUM

REPORTS OF SOCIETIES.

MUSKINGUM COUNTY MEDICAL SOCIETY.

THURSDAY EVENING, *August* 10, 1876.

The August session of the Muskingum County Medical Society was held at the residence of President Larzetere, Putnam Avenue.

The PRESIDENT stated that the topics for discussion were Diarrhœa and Dysentery.

Dr. MCELROY suggested that these topics be separated, and dysentery be discussed at this session first, and then, if time permitted, the subject of diarrhœa; which was accepted.

Dr. CHAMBERS said he knew something of dysentery from experience. In early life had had an epidemic to contend with, and was very unsuccessful. Had a good library, read what authors had to say, and treated patients in accordance with authority, and, as stated, very unsuccessfully. Had an opportunity to experiment in his own family, and was much more successful than when he was following in the footsteps of authority. In this way worked out a plan for himself. Does not lose any cases now-a-days. Keeps a compress, wet with either cold or warm water, over the abdomen all the time. Gives generally Dover's powder and Hyd. C. creta to keep every thing at rest. This failing, will give morphine, and moves the bowels every other day with castor oil or salines. Relies on opium, generally Dover's powder, to keep patients free from pain all the time; and Hyd. C. creta, with castor oil, to keep bowels open; but gives castor oil only every other day. Has tried nearly every thing, but finds the expectant treatment the best. Does not think it possible, by any treatment, to cut the disease short.

Dr. NYE thinks Doctor Chambers about right in what he has just said. Thinks that keeping the bowels wet all the time an almost indispensable remedial measure. Thinks the castor oil and opium treatment the best. Has used Epsom salts, with elix. vitriol, with very good results, and gives it with the utmost confidence. Has occasionally to use quinine to shorten paroxysms.

Dr. HOLDEN thinks dysentery a very important subject. Has had a large experience, much to the same effect as that of Dr. Chambers. Used to think that calomel ought never to be given, but now thinks otherwise. Finds most of the cases now-a-days typhoid in tendency. Finds the tongue furred, and frequent small discharges. Here he gives calomel, and follows it by saturated solution of Epsom salts, with elix. vitriol. No matter how often patients are going to stool, there is still something left to come away. After tongue cleans, has found nothing so good as lead and opium. Opium ¼ gr., lead 1½ to 3 grs. for a dose, he finds a very soothing treatment. Thinks that, after evacuations, quinine a very necessary medicine. Gave details of a case of chronic dysentery he treated in California many years ago. The patient had lain in a San Francisco hospital one year, and got no better; three months in a Sonora hospital, with no better results; and had come home to die. Had tried every doctor in Columbia, the place of his residence, but myself. He heard of the new doctor, and sent for me. Found him in an easy chair, with his elbows on his knees, his only or most comfortable position. He passed nothing but

XUM

a bloody jelly. He was much emaciated; could not sit up long, and had to be lifted or assisted, both up and down. Was at the time attended by Doctors Oxley and Campbell. Before prescribing, I went to see them, and told them Harris had sent for me, and asked them if they desired to retain him. They were glad to give him up to me. Dr. Holden gave him 15 grs. calomel, and, in five hours, a tablespoonful of oil, with a teaspoonful of spirits of turpentine. He complained much of its unpleasant results, and was, in fact, to all appearances, made terribly worse; lost the power of speech for six hours, and was very greatly prostrated; and neither Dr. Holden nor any of his friends expected him to live more than a few hours. Dr. Holden gave him laudanum, camphor, and turpentine in acacia mucilage, largely of laudanum, and placed a blister over the whole abdomen. In forty-eight hours he got easy from the effects of the blister; the discharges ceased at once; and in three months he was quite hale and hearty. Though successful in that case, he would not now repeat the treatment under the same circumstances. A larger experience dictated a milder course. Has used injections of carbolic acid with very satisfactory results.

Dr. BALL said that dysentery is now making its appearance, with other diseases, in our city. There are many varieties, necessiting very different treatment. Has had it with high fever, and with typhoid symptoms. Many years ago witnessed an epidemic in Irville. It was so severe in many cases that death ensued in forty-eight hours after decisive symptoms were developed. Did not seem that any thing in the way of medicines that were given did any good.

He liked a combination of the different modes of treatment spoken of by those who had preceded him in the discussion. Thinks calomel often necessary; used to think large doses needful. Now knows by experience that small, very small, one-half grain, are equally efficacious. Thinks that a combination of blue pill, lead, and morphine very satisfactory in its results. Thinks that saline purges are eminently beneficial. Gives small doses of calomel, and follows with a saline purge; and when the bowels have been freely evacuated, gives largely of opium. In fact, tries to keep patients in a condition of semi-narcotism much of the time. It gives them entire freedom from pain, and very often controls the more urgent dysenteric symptoms in from twenty-four to forty-eight hours. When opium by the mouth fails to bring the full measure of relief he deems desirable, gives opiate injections, and uses large doses. Believes that cold water, ice-cold, with large doses of opium injected into the rectum, has with high fever saved the life of some of his patients, who would, but for the relief this gave, have probably died.

Dr. OATLY thinks that Dr. Ball's treatment of acute dysentery very good. In chronic dysentery he prefers to use the speculum in the rectum, and pencil the ulcerations with solutions of nitrate of silver, or sometimes nitric acid, which applications are followed by the most decisive relief.

Dr. BALL thinks Dr. Oatly's suggestion, to make direct applications to ulcerations in the lower bowel, when they exist, very good practice. Said that copaiba in small doses in chronic dysentery was an exceedingly good remedy.

The PRESIDENT (Dr. Lazetere) felt like talking in a somewhat different channel from those who had preceded him in the discussion. Thinks that it is interesting to know what is the pathological condition in dysentery, the beginning, as it were, of the disorder, and its mode of progress. It is now conceded that the epithelial structure is almost always involved in a hyperæmic condition in dysentery, with function of the structure suspended.

The significance of this can be comprehended in view of the fact that the normal epithelial membrane is an essential condition of nutrition.

XUM

The epithelial membranes desquamate in much the same way as the skin, with this difference, that the skin throws off its dead epithelium in dry, horny scales, while the mucous epithelium is cast off in moist scales. In dysentery this desquamation is too rapid, not in scales, but in mucus or jelly-like material, wholly suspending or seriously impairing the functions—natural functions of the mucous lining of the intestinal tract. Thinks that it is necessary to understand what is going on in the bodies of patients as a needful preliminary to successful treatment. He would say that the acid sulphate of magnesia, Epsom salts, and elixir vitriol is a very useful agent. The acid retards the motions of the ciliary appendages of epithelial cells and structures. I see it frequently spoken of in current journals. In regard to other agents, thinks that opium is one of the most valuable, though he feels certain that it can do harm without proper preparation for its administration, which is the expulsion of effete matter. Instanced the case of Dr. J. B. Erwin, who, during a recent illness, was taking solution of opium largely (teaspoonful every two or three hours) for a dysenteric condition. He was not improving on it, and accidentally took a large dose of croton oil, half a teaspoonful, in a mistake, which evacuated a large amount of dry feces in small lumps, and, though apparently much prostrated, and very much alarmed, rapidly got better. Thinks it highly important that the whole intestinal canal should be fully evacuated at short intervals in dysentery.

Dr. NYE desired to make an addenda to his remarks. Thinks that the late Dr. Safford was preëminently successful in the treatment of dysentery, and his agents were sugar of lead and opium. His usual way of giving them was, ten to twenty drops of laudanum and two grains of lead every hour or two till pain and discharges ceased.

On motion of Dr. Larzetere, the Secretary was requested to furnish a copy of the journal of the Society's proceedings for publication to the Ohio Medical and Surgical Journal, of Columbus.

Z. COLLINS MCELROY, *Secretary.*

THE editor desires to apologize for the delayed appearance of this number of the JOURNAL. It has been occasioned by the short-comings of contributors, who have had their time taken up in preparation for, and attendance upon, the International Medical Congress and other similar gatherings. We promise to do our best to prevent its occurring in future.